

## INSIDE DOPE

by GEORGE F. AUBENECK

Stories of the Week  
Verse of the Week  
Gags of the Week  
Notes on Celebrities  
Historical Hint  
Good Burt Rosanagel  
This Is YOUR Business

### Stories of the Week

Smart Saul Butler, a Canadian dealer, took in almost anything "in trade" as part of down payments.

Biggest deal: a ton of smelt (tiny fish) on a home freezer. Butler packaged the smelt in 5-lb. parcels and offered them free to anyone who'd come in for a demonstration. Sold 31 refrigerators and seven freezers that way!

Saul's second favorite story concerns a funeral. Husband of the deceased sat beside her boyfriend. The latter wept copiously.

"Don't worry so," the husband consoled him. "I'll get married again."

"Life is rotten," grumped a never-happy negative sort of a guy.

"What are you complaining about? Looks like you're living well. And didn't your wife inherit \$100,000 recently?" rebutted a country club acquaintance.

"Uh huh, my grandfather left me \$200,000 last week, too."

"So why do you gripe?"

"Who's gonna do something for me next month?"

An anthropologist was impressed no end by the dexterity of South Seas spear-throwers.

Taking a half-dollar from his pocket, he placed in on a post 50 yards away. Promptly three natives split the coin in its precise center.

"Now, let's try it with a quarter!"

Again the trio hit the target squarely.

"I wonder if you could hit a dime?"

The best marksman took a look. "Doubt if I can do it," he sighed. "After all, I am getting along in years. Maybe my younger brother can." He shouted back toward the tents:

"Brother, can you spear a dime?"

### Verse of the Week

"By the yard life is hard.  
"By the inch it's a cinch."

—DR. HERBOLD C. HUNT

### Gags of the Week

"I wonder what would happen to the value of the dollar if everyone were paid what he thinks he's worth."—WILLIAM FEATHER

"In America, if you see a pretty girl you would like to approach, you cannot. The policeman, he arrests you. In Paris, the policeman he introduces you."—JACQUES BAR

### Notes on Celebrities

Cliff Fanning, pitcher for the St. Louis Browns, is selling food freezers in Missouri this winter.

Vic Mature, who sold commercial refrigeration equipment for his father prior to becoming a movie star, is managing a big new home appliance store in Hollywood.

To help him publicize its opening, nearly all his fellow Twentieth Century Fox stars—including Corinne Calvet, Edmund Gwenn, Jeanne Crain, Richard Widmark, Dan Dailey, Joanne Dru, Joan Crawford, and Anne Francis—were on hand.

"Can't remember when anything like it happened before," testified J. R. T. Campbell, a Twentieth Century Fox executive. "Usually a star's co-workers how fervently that 'the stinker' will lose his shirt."

### Historical Hint

First man to sell refrigeration in the United States was Frederic Tudor of Boston.

Way back in 1806 he hired men to saw blocks of ice from ponds and lakes in the winter. These huge ice cubes he shipped—insulated with sawdust—to tropical Central America.

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**AIR CONDITIONING & REFRIGERATION News**

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## How Bright Is the Future Of Air Conditioning?

Cloud Wampler, the brainy and highly respected President of Carrier Corp., predicted recently:

"Total consumer sales of air conditioning, which last year topped \$1 billion for the first time, will more than double during the next decade. Current unprecedented demand for home and industrial air conditioning should lift the industry's 1952 sales by at least \$1,000,000 over last year. By 1962 I foresee annual consumer sales in excess of \$2,300,000,000 and still continuing upward.

"Room air conditioners, the most popular home unit, will be in use in 500,000 American homes by the end of this year. Carrier's studies indicate that 10 years from now between 4,500,000 and 5,000,000 homes will have such single-room air conditioners—a tenfold increase. Before the end of this year the industry will ship its one millionth room air conditioner.

"Man will wake up in an air conditioned bedroom, eat breakfast in an air conditioned breakfast nook, drive in an air conditioned car to work in an air conditioned manufacturing plant or office building, return for dinner in an air conditioned dining room, relax in an air conditioned movie or an air conditioned living room watching a television program originating from an air conditioned studio.

"He will have forgotten the day when he used to wrestle windows up and down, fight with screens and storm windows, adjust radiators, and try to pacify furnaces. He will simply set a thermostat and forget it. The energy once thrown away in the battle with environment—a battle which in its simplest terms is the struggle to keep one's temperature at an even 98.6 degrees—will then be turned to more useful pursuits.

"Man will be able to perform more work and better work with the same expenditure of energy. He will have more leisure to enjoy himself, and he will feel better during his leisure hours. Asthma, hay fever, and other pollen-caused ailments will be forgotten as a major complaint. The smoke and soot-blackened lungs

(Concluded on Page 12)

## Prefab Homes Offer Year-Round Units

SYRACUSE, N. Y.—"For the first time," year-round air conditioning is to be made generally available in homes in the \$7,000 to \$12,000 price range, it was announced jointly by Gen. John J. O'Brien, president of Gunnison Homes, Inc., U. S. Steel's housing subsidiary, and Cloud Wampler, president of Carrier Corp.

These two companies have signed a contract under which Carrier will provide combination cooling and heating units to Gunnison Homes as optional equipment in all of its models to be produced and marketed in 1953.

In entering into this contract with Carrier, Gunnison Homes becomes the first of the nation's prefabricated home manufacturers to provide year-round air conditioning for its home purchasers, it was stated. The com-

(Concluded on Page 25, Column 4)

## NEMA Refrigerator Sales For Sept. Show Spurt; 9 Mos. Sales Lag from '51

NEW YORK CITY — September sales of household refrigerators by 16 firms reporting to the National Electrical Manufacturers Association were up from the year-ago level but below the August total, statistics released by the association show.

NEMA figures also disclose that both manufacturer and distributor sales for the first nine months lagged behind those for the like 1951 period.

Manufacturer sales in September amounted to 257,362 units, compared with 215,459 in the same month of last year and 272,985 in August, 1952.

(Concluded on Page 25, Column 4)

## Remington Adds New Room Coolers to Line

AUBURN, N. Y. — Several new models of room air conditioners were unveiled by Remington Air Conditioning Div., Remington Corp., at a meeting of regional sales managers, held at the Auburn plant recently.

The Remington line will be augmented in 1953 with a new deluxe ¾-hp. and 1-hp. window unit as well as several additional models to be announced at a later date.

The console line continues to feature two sizes of units, 1 hp. and 1½ hp. The units are housed in genuine wood cabinets in modern decor in dark mahogany or blonde. Cabinets are easily interchangeable between units since the same cabinet fits both the 1 and 1½-hp. units.

Remington's 1-hp. console has been

(Concluded on Back Page, Column 3)

## New Building Spearheads Deering Expansion Program

CINCINNATI — The Deering Air Conditioning Co. announced that it has acquired the former Sterling Cut Glass Co. building atop Mt. Adams here, and that building alterations are now in progress to insure production of up to 300 room air conditioners a day beginning in January.

The expansion program will necessitate the hiring of many more workers, the firm stated. The newly acquired building contains approximately 40,000 sq. ft. of manufacturing, assembling, and storage space on two levels, and about 1,500 sq. ft. of wood-paneled, air conditioned offices.

At the same time, the company announced that in addition to mer-

(Concluded on Back Page, Column 2)

## Lively Sessions, Election Mark ASRE Meeting

NEW YORK CITY—In lively sessions that marked an interesting technical program, the American Society of Refrigerating Engineers met in its annual meeting here this past week to discuss design and development trends in refrigerators and room air conditioners, and to debate trends in defrosting methods and other technical developments.

Prof. Richard C. Jordan of the College of Engineering of the University of Minnesota is the new president of the society.

In one of the few contested elec-

More detailed accounts of some of the sessions at the ASRE meeting will appear in later issues of the News.

tions in the history of the organization, Arthur J. Hess of Hess, Greiner & Pollard, Los Angeles, and Leon Buehler, Jr. of Creamery Package Mfg. Co., Chicago, were elected as the two vice presidents of ASRE, winning out over Dr. Donald Tressler, Chicago consultant who was the third candidate. New treasurer is Carlyle Ashley of Carrier Corp.

The Wolverine Tube Div. award for the best paper published in *Refrigerating Engineering* went to Dr. Daniel C. Schiavone, of Bell Aircraft Corp., for his paper on "Friction Factors of Desiccants in Refrigerant Systems." The award for the best

(Concluded on Back Page, Column 1)

## Bendix To Use Closed Circuit TV To Show New Product Dec. 30

SOUTH BEND, Ind.—Closed circuit theater television will get its "first large-scale use by industry" on Dec. 30 when Bendix Home Appliances uses this medium to introduce a "revolutionary new product" to every key marketing area in the country.

The program will be carried in theaters in more than 40 cities, making possible an audience of more than 100,000 of the company's distributors, dealers, salesmen, and invited guests, reportedly the largest in closed circuit theater television history.

(Although the announcement did not identify the new product, it is understood to be a combination washer and dryer which will wash and fluff-dry clothes in one continuous cycle.)

(Concluded on Page 4, Column 5)

## Sanitary Changes Name To Quicfrez, Inc.

FOND DU LAC, Wis.—Quicfrez, Inc. is the new name adopted by Sanitary Refrigerator Co. here, manufacturer of refrigerators and home freezers, Henry Uihlein, president, has announced.

The name Quicfrez has been used for the company's products for several years and has been promoted extensively in trade and consumer ads.

"This recent action of the board of directors is a natural step which follows general trade and consumer acceptance of the Quicfrez name," Uihlein explained.

The company was founded in 1907 and was one of the first to manufacture home freezers. Quicfrez makes a line of five different models, in addition to its line of refrigerators.

## Deepfreeze Introduces '53 Appliance Line

19-Cu. Ft. Upright Freezer, Decorative Color Accents, Restyling Are Highlights

CHICAGO—Addition of a 19-cu. ft. upright home freezer, re-styling of all chest-type freezer models with restoration to production of two "low end" units, and colorful decorative accents for its refrigerator line mark Deepfreeze Appliance Div.'s lines for 1953.

Introduction of the new lines took place last week as distributors from the United States and Canada met at the annual Deepfreeze convention to hear promotion, merchandising, and sales plans for 1953.

The new upright freezer model, the CU-19, is designed primarily for the home and the kitchen despite its outside capacity adequate to store 665 lbs. of food.

Color-styled with "Bermuda green" interior, as are all other deluxe models of Deepfreeze home freezers and refrigerators for 1953, the CU-19 will probably carry a price tag of \$619.95, it was stated.

Deepfreeze last June introduced its first upright model, the CU-11.

Four deluxe units, with capacities of 7, 13, 17, and 23-cu. ft. head the chest-type freezer offering for the new year. They are the C-75, with a suggested retail price of \$299.95; the C-135 at \$469.95; the C-175 at \$549.95; and the C-235 at \$629.95. All feature design and decorative rev-

(Concluded on Page 4, Column 3)

## \$1,500,000 Expansion To Double Freezer Production

NORTH CHICAGO — A \$1,500,000 expansion of its Lake Bluff, Ill. manufacturing facilities that will result in doubling of its home freezer production within a year was announced last week by Deepfreeze.

L. J. Sorensen, vice president of Motor Products Corp. and general manager of its Deepfreeze Appliance Div., made the announcement at the conclusion of a national distributor conference during which the company's 1953 line of freezers, refrigerators, and electric ranges was introduced.

"When the new facilities are completed, we shall be able to boost our production of home freezers and refrigerators to about 600,000 units annually," Sorensen said. "The plant will be designed so that it can run at

(Concluded on Page 4, Column 1)

## Macy Signs Contract With Sunbeam; Suit Ends

NEW YORK CITY—R. H. Macy & Co., Inc. announced that the suit filed against it by Sunbeam Corp. has been settled and that Macy's New York has signed a fair trade contract with the manufacturer.

Sunbeam had sued Macy's for treble damages of \$6,000,000, charging that the store had conspired to monopolize the sale of "Mixmasters" in the New York area during the price war in the summer of 1951. Details of the settlement were not immediately made known.

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**T**ODAY, at Louisville, Ky., General Electric is building Appliance Park—the world's largest appliance-manufacturing plant.

It is a demonstration of our belief that the major appliance business will continue to grow and grow in the years ahead. We're backing that belief with these great, new manufacturing facilities. Appliance Park will produce finer appliances, representing better values to the consumer than ever before.

You, too, face great opportunity for growth. First, in the vast expansion of consumer demand for today's low-saturation appliances such as automatic washers, dishwashers, food freezers, room air conditioners, and dryers. Second, in the replacement market for today's established appliances such as refrigerators.

We believe that the following 16-point program will convince you that General Electric is offering the soundest and most complete program for reaching both of these great markets.

**1 General Electric Offers An Outstanding Line—A Fine Line**—with a wide choice of models and prices—and the exclusive features your customers want.

**2 General Electric Offers "Consumer Preference"**—In independent national surveys, 55.7% of women said, "General Electric makes the best appliances."

**3 General Electric Offers Dependability**—General Electric Appliances have earned a nationwide reputation for year-in, year-out dependability unmatched by any other manufacturer.

**4 General Electric Offers Unusual Sales Opportunities**—Concentration on one fine line offers more efficient selling, with its consequent better turnover and fewer mark-downs. Concentration on one *complete line of matched appliances* offers you the much-desired balanced annual sales curve.

**5 General Electric Offers Price Protection**—Protection on your reported inventory against lowering of list prices of General Electric Major Appliances.

**6 General Electric Offers A Powerful Advertising Program**—The Joan Davis and Fred Waring Shows on TV, the Bing Crosby Show on radio, leading national magazines and hundreds of newspapers are steadily pre-selling General Electric Appliances to your customers.

**7 General Electric Offers Comprehensive Co-op Advertising**—General Electric and its distributor share the costs in newspapers, outdoor posters, car cards, TV, radio and motion pictures.

**8 General Electric Offers A Complete Display Program**—for each major appliance.

**9 General Electric Offers A Complete Sales-Aid Program**—tested special promotions, sales literature, presenta-





# Faith in the Future

tions demonstration kits, consumer motion pictures, and many other aids for complete year-around programs.

**10 General Electric Offers A Realistic Sales-Improvement Program**—continuous sales education for sales personnel.

**11 General Electric Offers Dependable Product Service**—Product-service schools maintain high standards among General Electric servicemen.

**12 General Electric Offers A Complete Finance Service**—The General Electric Credit Corporation covers every finance operation for *you* and your *customers*.

**13 General Electric Offers Continuous Distributor Cooperation**—The General Electric plan is not simply to sell appliances to *you*—but to help you sell them to your *customers*.

**14 General Electric Offers Important Special Services**—The General Electric Home Bureau, leader in kitchen-laundry

planning, and the Consumers Institute, conducting courses for salespeople in the proper use and care of appliances.

**15 General Electric Offers Prestige**—General Electric is the oldest and most respected name in the electrical industry.

**16 General Electric Offers A Stake In Its Blueprint Of Opportunity**—Appliance Park will manufacture better appliance *values* than ever before. You and your customers can share in these values.

Appliance Park is our symbol of faith in the future—but it is also a very realistic blueprint of opportunity for us and for *you*.

*Clarence H. Linder*  
CLARENCE H. LINDER, General Manager

Major Appliance Division  
Louisville 2, Kentucky

GENERAL  ELECTRIC

## HOUSEHOLD REFRIGERATION

### Deepfreeze Freezer Expansion--

(Concluded from Page 1, Column 5) full capacity on home freezer construction, or on refrigerator manufacture, or on any desired combination of the two, depending on current market requirements.

Sorenson disclosed that ground has been broken and the necessary building is under way for the addition to the Lake Bluff plant, which is located on Skokie Highway just west and south of the Great Lakes Naval Training Station. He expressed confidence that the new facilities will be in operation "by the middle of 1953."

The work when completed will provide an additional 100,000 sq. ft. of manufacturing space on the eastern side of the present structure.

The present plant, which was completed in 1950 at a cost of \$7,000,000, is a modern, one-story structure with 236,000 sq. ft. of manufacturing and administrative space on a 57-acre site. It is served by spur lines of the Elgin, Joliet & Eastern Railroad and the Chicago & Northwestern Railroad.

Its home freezer factory in North Chicago is a one-story structure with 270,000 sq. ft. of manufacturing space. This will be kept in production and the new facilities will be devoted to increased output of home freezers and other Deepfreeze products, Sorenson pointed out.

Sorenson said that his company's

"unrestrained enthusiasm for the future of the major appliance market, particularly in the field of home, low temperature food storage units" dictated the proposed development.

He pointed out that early in 1952 the home freezer industry reached the "magic 10% figure" in consumer acceptance, that is, at least 10% of this country's 45,000,000 families with wired homes had then purchased and installed these appliances. A 10% saturation has traditionally been the signal for widespread public demand.

Sorenson predicted that 1,250,000 home freezers will be built and sold by the entire industry in the year just ending and estimated that sales would reach 1,500,000 units during 1953. This would bring total ownership of home freezing units to the 6-million mark.

Deepfreeze, which claims to be the first manufacturer of freezers for home use, began producing the units in 1938 in a converted creamery at 2301 Davis St. in North Chicago. This facility has been expanded twice and cannot be further enlarged because of space limitations.

The Lake Bluff plant was built primarily for refrigerator production and was so designed that expansion of the type now proposed could be speedily accomplished.

Deepfreeze now has 1,500 employees in its two Chicago-area factories.

### Deepfreeze Appliance Line--

(Concluded from Page 1, Column 5) sions and each will carry the new interior color treatment.

The standard B-7 and B-13 chest-type freezers, with retail prices of \$279.95 and \$419.95, respectively, have been restored to the line, after a cessation last spring because of the materials situation.

All of the 1953 Deepfreeze refrigerators feature storage facilities in the door, and "Bermuda green" interiors. Two of these have been designated as "Electromatic" models, with automatic defrost.

#### 2 AUTOMATIC DEFROST MODELS

Deepfreeze will introduce its A-960, of 9.3-cu. ft. capacity, and its A-1150, of 11-cu. ft. capacity at \$389.95 and \$439.95, respectively. Both are "Electromatic" defrost models. The B-960 will carry a price tag of \$349.95, and the B-1150, \$389.95, and both feature the new green interiors.

Two deluxe models, the G-960 at \$299.95 and the G-1150 at \$349.95, carry the new color treatment and such Deepfreeze features as ample freezer compartment (approximately 50 lbs.) door storage facilities, twin high-humidity crispers, and butter boxes.

Economy model of the new refrigerator line is the F-960, with standard white interior and a number of convenience features including freezer compartment, frozen storage drawer, rust-resistant shelves, twin high-humidity crispers, and storage facilities in the door. This model will carry a suggested retail price of \$279.95.

Rounding out the Deepfreeze ap-

pliance lines for 1953 are four electric ranges.

RE-4 has two ovens with picture windows, and the RD-4 a "banquet-sized" oven with picture window. Both are divided-top ranges and are to be retailed at \$399.95 for the RE-4 and \$349.95 for the RD-4. An apartment house model, the RA-3 and the RB-4, a 36-in. cabinet model, complete the line.

#### ONE-PIECE CABINET

The new CU-19 upright freezer features a one-piece heavy-duty steel cabinet with no seams or crevices. It has four "zero shelves" for storage and there are two wire baskets for smaller food packages.

The CU-11 upright freezer is designed with a static condenser. Every shelf acts as a "quick freezer." Condenser and refrigerant coils are placed on the underside of the shelves. Centered at the top of the freezer interior is a single temperature dial which enables the user to set the freezer at 10 different levels of cold from 6° to -10°.

The full-length, one-piece doors of the upright models are heavy-gauge steel and ride on stainless steel-bearing hinges. Moulded rubber gaskets insure positive door seal.

The door has a finger-tip pressure chrome handle with escutcheon and a trigger-type, self-sealing door latch operating under 60 lbs. pressure. The polystyrene breaker strip is also metal-encased green. High density "Fiberglas" insulation is used throughout. There is a floor-leveling device.

Apart from the styling and decorative changes, the chest-type freezers in the 1953 line feature a floating action lid and have a trigger-action handle with lock.

The interior of the freezer is automatically illuminated when the lid is raised. "Sweat-proof" design is claimed to prevent moisture formation on the outside of the cabinet under all humidity conditions.

#### 2-SIGNAL SYSTEM ON FREEZER

Deluxe models have a "Silent Signal" electrical indicator which shows that desired temperature is being maintained in the freezer. A white light glows constantly to show that power is on and a red light flashes on if inside temperature rises.

The Deepfreeze freezer compartment in all the new refrigerator models permits maintenance of near-zero temperatures for preservation of up to 50 lbs. of frozen foods. All models come equipped with specially designed, additional space in the door interiors to provide storage for bottles, eggs, and vegetables. "Handy Jugs" for constant cooling of juices and removable "Handy Bins" are built into the doors of four models.

All have full-length doors and 10-point temperature controls. All have vegetable crispers and large shelf areas.

In the automatic defrosting "electromatic" models, the unit defrosts itself and disposes of the resultant water through a special evaporating system.

### Bendix Program--

(Concluded from Page 1, Column 4) operation. The unit is expected to sell for less than the combined price of an automatic washer and an automatic dryer.

(It was also reported that Bendix will market six refrigerator models, five freezers, and six ranges. The refrigerator line is said to include automatic defrosting models and the freezer line to consist of chest-type units and an 18-cu. ft. upright with a full-length exterior door.)

In a joint statement by the Bendix Div., Avco Mfg. Corp., and Teleconference, Inc., of New York, the program distributing organization, it was announced that Bendix would make the first major use of the medium as a replacement for traditional dealer meetings which ordinarily are used to introduce products.

Teleconference has arranged for the program to be carried through-out the country in theaters of United-Paramount Theaters, Inc., Warner's, Loew's, RKO, Fabian, and others.

"We feel that closed circuit telecasting possesses unlimited opportunities for presenting to the best possible advantage this great new appliance our dealers will have on their floors in a very few weeks," Judson S. Sayre, Avco vice president and general manager of Bendix, said.

In addition, Sayre pointed out that by use of closed circuit television, the company's top team of salesmen could be used to present the company's story in the most advantageous manner.

He added that while the cost of the Dec. 30 telecast would be comparable to regional dealer meetings, a great saving would be effected in the hours and energy spent by executives in travel to individual meetings.

Robert H. O'Brien, secretary-treasurer of United-Paramount Theaters, Inc., one of the pioneers in closed circuit theater television, said that the acceptance of closed circuit television by Bendix was an indication its use would be accelerated.

The program, of one hour's duration, will originate in the Garrick Theater at Chicago and will be carried by more than 10,000 miles of coaxial cable and micro wave relay to the various theaters.

As a direct result of the Bendix program, many additional theaters installed closed circuit facilities in anticipation of use by a variety of industrial and educational groups.

Closed circuit television has been used previously to telecast sporting events and by governmental agencies to conduct civil defense training.

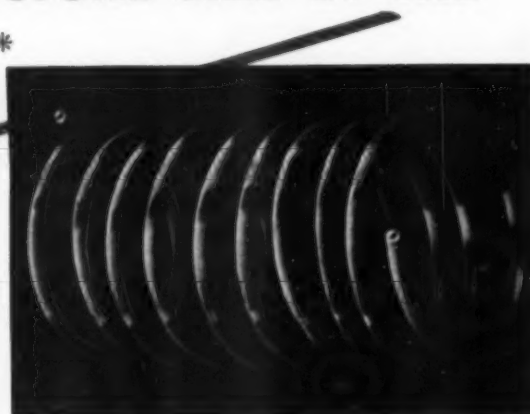
Among the cities where the Bendix program will be televised will be: Albany, Atlanta, Buffalo, Charlotte, Cincinnati, Cleveland, Columbus, Dayton, Detroit, Pittsburgh, Providence, Richmond, Toledo, Jacksonville, Baltimore, Boston, Philadelphia, Des Moines, St. Louis.

Also, Dallas, Birmingham, Houston, Milwaukee, St. Paul, Kansas City, Memphis, New Orleans, Omaha, Gary, Indianapolis, Louisville, Denver, Phoenix, Salt Lake City, Los Angeles, San Francisco, Seattle, and Portland, Ore.

## HERE IS THE ACTUAL SIZE OF THE

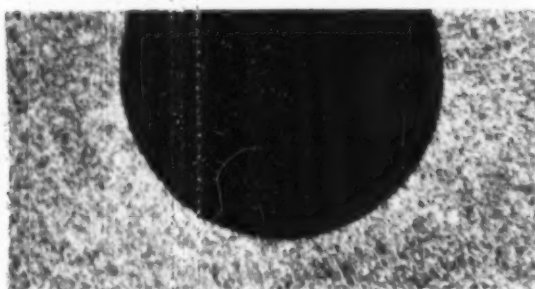
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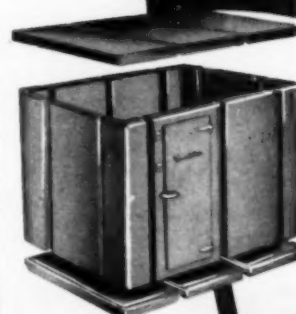
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THE COMPLETE  
LINE FOR 1953

# **NORGE**

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MACHINERY ROOM. Basement of state hospital in Traverse City, Mich., houses 10 condensing units.



THREE LARGE frozen food storage rooms surround large vestibule. Sharp freeze room is shown through open doorway.



CEREAL STORAGE is provided in this room, which is typical of normal temperature storage rooms of hospital.

## Hospital Food Storage Facilities

Five Temperature Zones Offer Ideal Conditions To Store Provisions For 3,400 Persons Per Meal at Michigan Mental Hospital

By C. Dale Meriele

TRAVERSE CITY, Mich.—Greater efficiency in the storage and preparation of foods will be made possible by the new Cold Storage and Service Bldg. recently completed for the Traverse City State hospital here.

Caring for more than 2,800 mental patients, this state institution serves nearly 3,400 persons per meal. It necessarily deals in large quantities and in addition to buying and storing foods in truck-load lots, the hospital also raises much of its own and has its own dairy.

To give a better picture of why extensive refrigerated storage facilities are needed, officials of the institution cite a few food purchase and consumption figures: 350 to 400 hogs, 50 veals and 50 cows a year; 2,000 lbs. of lard a month; 2,000 lbs. of butter and 20 cases of eggs a week; 8,000 to 9,000 lbs. of cheese and 70,000 lbs. of dried fruits a year; 1,500 crates of potatoes monthly.

### 26 Refrigerated Rooms

In all, there are 26 refrigerated rooms in the Cold Storage and Service Bldg. which are held at temperatures ranging from well below 0° F. for quick freezing to 50° F. for flour and pumpkin storage by nine condensing units. There is also a tenth compressor in the machinery room which serves the ice cream freezer.

The latter is a 7½-hp. machine. The others include: seven 20-hp. units and two 10-hp.

Building is of one story and basement design with 14 of the refrigerated rooms and the machinery room located in the basement. The other 12 rooms, the large bakery, and the receiving and processing room are on the first floor.

### System Hooked Up In Zones

The refrigerating systems serving the rooms are hooked up as five separate zones, the rooms in each zone being about the same temperature.

Serving Zone I are two 20-hp. compressors with a third 20-hp. machine as a standby. All the Zone I rooms are in the basement. Their storage function, temperature, and approximate floor size (ceilings are 8 ft. high) are as follows:

Onion storage, 40° F., 20 by 20 ft.  
Pumpkins, 50° F., 27 by 20 ft.  
Dried beans, 50° F., irregular shape: 20 by 31 by 19 by 14 by 31 ft.  
Cabbage, 35° F., 20 by 21 ft.  
Sauerkraut, 35° F., 20 by 21 ft.  
Butter, 35° F., triangular shape: 24 by 28 by 20 ft.

Dried fruit, 35° F., 22 by 22 ft.  
Cheese, 35° F., 19 by 22 ft.  
Potatoes, 40° F., 43 by 21 ft.  
Potatoes, 40° F., 28 by 52 ft.  
Beets, 35° F., 22 by 19 ft.  
Apples, 35° F., 27 by 38 ft.  
Celery, 35° F., 19 by 19 ft.  
Fresh fruit, 35° F., 21 by 19 ft.

The sharp freeze room on the first floor is set up as a zone in itself, designated Zone II. The freezer room measures 13 by 21 ft. and the floor-mounted blast coil is powered by three interconnected 20-hp. compressors to maintain -20° F. temperatures. The hospital plans to freeze a considerable amount of food produced on its own farm.

### 3 Frozen Food Storage Rooms

Zone III includes the three 0° F. frozen food storage rooms adjoining the freezer. High-side equipment for this zone consists of a 10-hp. compressor with another of the same size as a standby.

Considerable frozen storage space is provided by the three rooms. Two of them are each about 21 by 26 ft. in size while the third is of irregular shape with five walls measuring 26 by 17 by 18 by 20 by 14 ft.

Zone IV on the first floor includes eight rooms handled by a 20-hp. compressor. The Zone IV rooms are as follows:

Vestibule for freezer and frozen storage rooms, 35° F., irregular shape: 13 by 35 by 17 by 22 ft.  
Cereal storage, 45° F., 19 by 41 ft.  
Flour, 50° F., 21 by 41 ft.  
Prepared meats, 35° F., 20 by 32 ft.

Cold room, 28° F., 20 by 22 ft.  
Cold room, 28° F., 20 by 22 ft.  
Meat cooler, 28° F., 22 by 27 ft.  
Meat cooler, 28° F., 20 by 20 ft.

Zone V consists of the 7½-hp. compressor and the ice cream room. The refrigeration equipment for the building was installed under two contracts by the Garlock Sales Co., Lansing, Mich., and Paul Garthe, Inc., Fridaire outlet in Traverse City. Refrigerator insulation and doors were put in by the Tony Batenburg Insulation Co., Grand Rapids, Mich. The Christman Co. and Distel Heating Co., Lansing, were the general and mechanical contractors, respectively.

The work was performed under the direction of A. N. Langius, director of the Building Division Department of Administration. The firm of Shreve, Walker and Associates of Detroit was the architect on the project for the state of Michigan.

One of the 10 compressors on this job—the 7½-hp. unit on the ice cream freezer—has a water-cooled

condenser. The other nine machines are hooked up to three evaporative condensers on the roof of the building.

One of these is connected to the Zone I compressors (two 20-hp. units for normal operation and a third 20 hp. for standby). A second evapo-

lative condenser takes care of Zone IV with its 20-hp. machine. The third "evap" has a split circuit. One circuit is connected to the three 20-hp. compressors on the sharp freeze room (Zone II) while the other circuit is employed by the two 10-hp. machines on the frozen food storage rooms (Zone III).

### Color-Coded Drawing Makes Quick Identification

Incidentally, to show quickly the zoning arrangement, which compressors serve which rooms, and how the machines are tied into the evaporative condensers, a neat color-coded schematic has been painted on the door of one of the large switch panels in the machinery room.

Controls for the operation of the compressors and the condensers are interlocked. Compressor operation is controlled by a pressure switch on

the receiver. Whenever a compressor starts, fans on the evaporative condenser connected to the compressor also start.

Whether the water pump on the evaporative condenser cuts in when the compressor starts depends on the outdoor temperature. If the outdoor air is 40° F. or above, the pump operates, but if the temperature is below 40° F. the pump does not operate and the unit functions as an air-cooled condenser.

This, of course, is to prevent freezing of the water used in the condenser during winter operation. The condensers are automatically drained for winter operation.

Automatic by-pass dampers and ducts are also provided on the evaporative condensers so that discharge air can be by-passed back into the intake if the head pressure falls too

(Concluded on next page)

## Get the most

### 1. FABRICATION SAVINGS

In all likelihood, Bundy engineers have already worked out fabrication problems on parts similar to yours. Tapping this backlog of experience can mean better tubing parts at lower cost to you. Although the compressor part tube shown at left is reduced from 1½" I.D. to a .060" metering orifice, Length A must be held straight for 1½". Yet Bundy produces this part in just three press-swaging operations. In this case, as in many others, Bundy experience spelled the difference between long experimentation and speedy, economical fabrication.

### 2. PRODUCTION SAVINGS

Bundy engineers are constantly on the alert for new ways to pare production costs. Specifications for the compressor-unit mounting frame shown at left call for U-bolt locating notches (arrows). Although ordinarily a separate press operation would be required, notching operations have been incorporated into the bending fixture—another example of Bundy engineering savvy at work. Result: minimum piece price to customer because of decreases in handling and number of operations.

## Bundyweld Tubing

DOUBLE-WALLED FROM A SINGLE STRIP

### WHY BUNDYWELD IS BETTER TUBING



Bundyweld starts as a single strip of copper-coated steel. Then it's . . .



continuously rolled twice around laterally into a tube of uniform thickness, and . . .



passed through a furnace. Copper coating fused with steel. Presto . . .



Bundyweld, double-walled and brazed through 360° of wall contact.



NOTE the exclusive patented Bundyweld beveled edges, which afford a smoother joint, absence of bead and less chance for any leakage.

Bundy Tubing Distributors and Representatives: Cambridge 42, Mass.: Austin-Hartings Co., Inc., 226 River St. • Chattanooga 2, Tenn.: Pelton-Deakin Co., 823-824 Chattanooga Blvd. • Chicago 22, Ill.: Loshan-Hickey Co., 3133 W. 47th Place • Elmhurst, New Jersey: A. B. Murray Co., Inc., Post Office Box 476 • Philadelphia 3, Penn.: Ruten & Co., 1717 Sanson St. • San Francisco 10, Calif.: Pacific Metals Co., Ltd., 3100 19th St. • Seattle 4, Wash.: Eagle Metals Co., 4755 First Ave. South • Toronto 5, Ontario, Canada: Alloy Metal Sales, Ltd., 181 Fleet St. East • Bundyweld nickel and Monel tubing is sold by distributors of nickel and nickel alloys in principal cities.

Be Smart . . . order from edition 157

HARRY ALTER'S  
**DEPENDABOOK**  
Fall and Winter, 1952-53

Over 9,000 Items!

REFRIGERATION Parts and Supplies  
TELEVISION • RADIO • HEATING  
ELECTRIC MOTOR PARTS • AIR CONDITIONING

Write for your copy—TODAY!

WHOLESALE ONLY

The HARRY ALTER CO. Inc. • 1728 S. Michigan Ave., Chicago 16, Ill.  
124 Lafayette St., New York 13, N. Y.





FIRST FLOOR layout of Cold Storage and Service Bldg. at Traverse City state hospital. Additional storage and machinery rooms are located in basement.

## 5 Temperature Zones Hold Food--

(Concluded from preceding page) low during severe winter weather. These dampers are controlled by a modulating pressure switch.

All the compressors are driven by 440-volt three-phase motors. Control circuits, however, operate on 110 volts. Compressors are neatly mount-

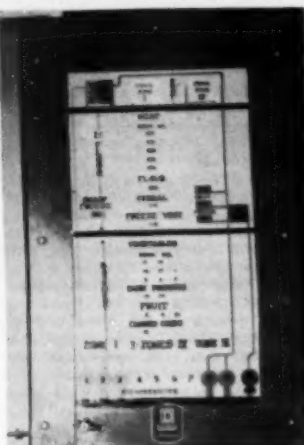
ed on raised concrete bases with the use of vibration isolation pads. Capacity reduction is also provided on each of the machines.

At each compressor there is also a small panel board on which is mounted a pair of high pressure and compound gauges.

All the low sides in this installation are blower coils arranged for manually controlled water defrosting. Operation of coils is controlled by liquid line solenoids.

Driers and strainers are also installed in the liquid line just ahead of the solenoids. But just ahead of the drier and between the solenoid and the expansion valve there are hand valves. There is also a hand valve in the suction line in each room.

Purpose of these valves is to permit any component item to be quickly isolated for servicing or replacement if needed. The entire system is similarly valved to bring in the standbys or cut a machine out.



HOOK-UP of equipment is shown schematically in color on large switch panel door in machinery room.

## Commercial Refrigeration

### Activated Carbon Helps Keep Foods from Absorbing 'Foreign' Flavors In Cold Storage

DANBURY, Conn.—Results of research into the effect of atmospheric odors in refrigerated storage rooms on food flavors were discussed before the American Chemical Society recently by Amos Turk, director of research for the Connor Engineering Corp. here.

Turk told the chemists that an animal naturally selected a food diet which is adequate for itself by smelling it. He added that humans also predicate their food selection largely on odor and the odor components of their sense of taste.

"At one time or another," he declared, "everyone of us has had the occasion to reject instinctively a particular food which did not have its natural taste or odor. In this way, we automatically protect ourselves against possible spoilage or other adulteration."

"The 'natural' flavor of a food, however, which is instinctively acceptable to us, is by no means indestructible," he went on. "The necessity for modern methods of food distribution to our large populations has inevitably led to circumstances in which a longer time interval elapses between harvest or slaughter and final consumption."

"To eliminate spoilage during this necessary interval commercial refrigeration has been developed. The flavor of food, however, is heir to myriads of contaminating effects during cold storage."

"These potential flavor contaminants include odors from the storage structure itself and its insulation, from the organic material which has inevitably been adsorbed in the storage structure, and vapors and gases from the stored food itself, especially when parts of the food have begun to decay."

"In mixed food storage the danger of cross-contamination of flavor is always present, especially from spiced meats, cheese, pickles, as well as from small overlooked quantities of decaying meat or rancid fat."

"The rate of flavor contamination of stored food depends on the concentration of foreign odorous vapors in the atmosphere."

"Food storage experiments," Turk explained, "were carried out in two duplicate walk-in coolers, one designated as the 'carbon' and the other as the 'control' room."

"The air in the 'carbon' room was purified by circulating it continuously through two canisters filled with activated carbon. This principle of air purification is the same as that employed by the gas mask."

"Identical fresh food (meat and butter) was kept in the two rooms and was subjected to various sources of contamination. These contaminating sources included spices, sauerkraut, pickles, paint, onions, melons, and spoiled meats and rancid fats."

"The odor contaminants selected were intended to duplicate those likely to be present in commercial food storage, where different varieties of food may be stored together, unnoticed food scraps may decompose in inaccessible parts of the room, and, in rare instances, a storage box may be painted or oiled."

"The flavor of the food was judged by a panel of 10 food tasters, all selected from a representative group of office and plant employees. The taste scores and their statistical analyses showed slightly significant differences in meat and butter flavor due to removal of atmospheric odors by activated carbon."

"Foreign odors will contaminate food flavor to a degree which depends on the prevailing odor intensity in the storage space and the duration of food storage in the odorous atmosphere. Food flavor contamination by atmospheric odors is not practically significant when the odor level is too low to be detected by the nose."

"Thus the positive removal of odor in a food storage space is, for all practical purposes, equivalent to the effective elimination of flavor adulteration by air-borne odorous vapors."

"This was further shown by the results of experiments in which the panel members judged that food stored under activated carbon air purification in a room with sources of contamination was equal in flavor to equivalent food stored alone in a clean room."

"The taste panel members proved that the 'natural' taste is the preferred one because the taste scores were overwhelmingly in favor of the uncontaminated foods."

"Descriptions of the contaminated samples included 'It's flat,' 'Off-taste,' 'Lack of flavor,' 'Meaty,' 'Different,' 'Gamey,' 'Sharp,' 'Odd,' 'Did not like it'—expressions which reflect the poverty of language for describing odor and taste senses."

"Some members were sufficiently acute to describe the butter stored with onions as 'oniony,' and the meat stored with pickles and sauerkraut as 'sour.'"

### Savannah, Ga. To Get New Refrigerated Storage Plant

SAVANNAH, Ga.—A new refrigerated storage plant which will include quick freeze facilities, will be built at the State Port at a cost of \$1,168,068 by a newly formed corporation.

The plant, to have a gross capacity of 350,000 cu. ft., will be constructed by the Georgia Refrigerated Warehouses, Inc.

John J. Rauers, Jr., Owen H. Page, Jr., and William Lattimore formed the concern.

### Braverman Named Hirsh West Coast Representative

SKOKIE, Ill.—Joseph Braverman has been appointed West Coast sales representative of the S. A. Hirsh Mfg. Co., shelving manufacturer here, Dave Shulman, vice president in charge of sales, announced recently.

Formerly field supervisor of Hirsh's southeastern territory, Braverman will cover the seven-state region of Washington, Oregon, California, Nevada, Arizona, Utah, and Idaho, with headquarters in Los Angeles.

# from your refrigeration tubing dollar



Dependable performance, unequalled tubing features, and priceless engineering skills—yours when you specify Bundyweld Tubing.

You get completely dependable tubing performance, *proved* by the millions of refrigeration units made with tubing parts of Bundyweld since 1930.

You get leakproof, lighter, stronger tubing with high bursting strength, high thermal conductivity. Bundyweld is the only tubing double-walled from a single strip, copper-brazed through 360° of wall contact.

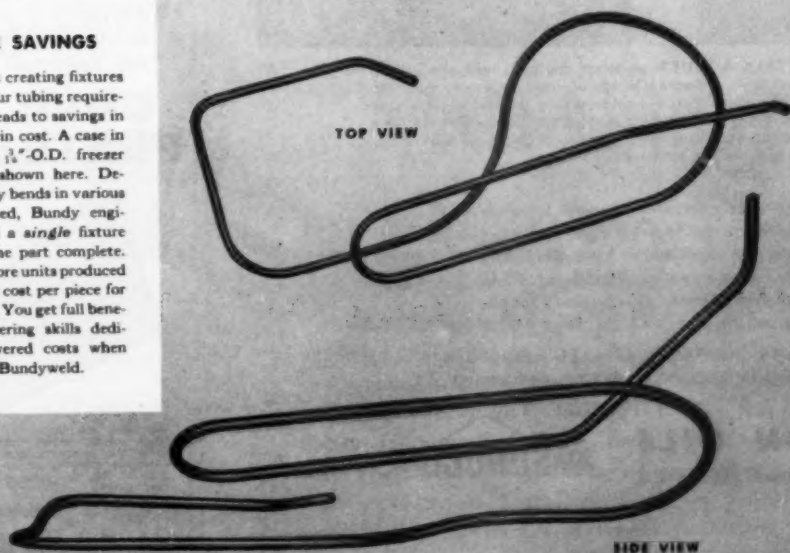
You tap priceless engineering skills. Bundy engineers can often spot major savings in material and production costs during your design and planning stages. And if you wish, Bundy will fabricate tubing parts for you—deliver them as specified exactly when you want them.

For your greatest refrigeration tubing buy on every count, specify Bundyweld.

Contact a Bundyweld Distributor (listed lower left), or write Bundy Tubing Company, Detroit 14, Michigan

## 3. TIME SAVINGS

Bundy skill in creating fixtures to produce your tubing requirements often leads to savings in time, savings in cost. A case in point is the 1/2" O.D. freezer exhaust coil shown here. Despite the many bends in various planes required, Bundy engineers devised a *single* fixture to produce the part complete. The result: more units produced per hour, less cost per piece for the customer. You get full benefit of engineering skills dedicated to lowered costs when you specify Bundyweld.





### Kay-Tee UNIT COOLER

by  
**KRAMER**

offers more BTU's for less money as a result of extensive engineering advances and the development of KRAMER'S newly patented fin and tube construction.

Write for  
Catalog K-225

In seven sizes,  
2,500 to 12,000 BTU's per hour

**KRAMER TRENTON CO. - Trenton 5, N.J.**

# Commercial Refrigeration

## Commercial Dealer In Atlanta Sponsors Contest To Pick 'Grocer of The Year'

ATLANTA—Picking the local "Grocer of the Year" and naming him at an annual party staged for Atlanta food retailers is one of the ways in which Gordon McWilliams, commercial refrigeration dealer here, puts into practice his profit-making formula: "Win the grocer's goodwill and keep it."

While he maintains a busy air conditioning and heating department, McWilliams' major interest is the sale of food-store refrigeration equipment. And he has achieved a profitable volume in this competitive field.

Explaining his approach to this field, McWilliams says: "We started out to make friends of our local food retailers and we have stuck to this system ever since. By that I mean we spend a lot of time socially with our grocers and keep them coming in for other reasons than figuring the cost of a new meat case."

As a result of this policy, the Hussmann dealer's refrigeration salesmen know most of their customers and prospects by their first names and something about their personal interests, family, etc. It's a selling technique that has proved invaluable.

The annual party for grocers is usually held at the Peachtree St. headquarters of the firm, with refreshments and entertainment provided. Sometimes the parties are so large that rented banquet rooms, or even larger quarters in local hotels, are required.

At each such get-together, McWilliams names the "Grocer of the Year" and awards him a worthwhile prize. Another McWilliams stunt is to sponsor a party whenever his firm outfits a new store. To every grocer in the city goes a mimeographed postcard inviting him to attend the grand opening of the remodeled or new store. McWilliams appends a note that the visit will teach the grocer a bit about refrigeration.

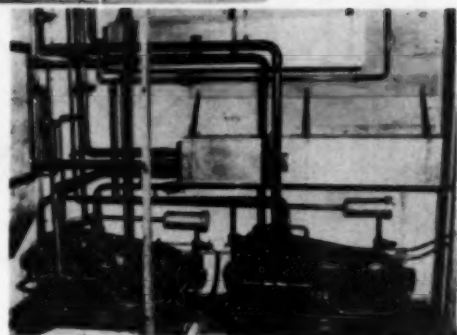
For the party, McWilliams provides a band, usually broadcast time and prizes to attract the public.

Such events ordinarily cost the refrigeration dealer little. He enlists the aid of other suppliers to provide free baskets of groceries, etc.

McWilliams is on hand to "shake" with each of the visiting grocers, and thus has become a familiar figure to most food-store proprietors.



LEFT: Inside view of refrigerator shows three Thermobank evaporators installed at Lincoln Trail Turkey Farm.



RIGHT: View of compressor room shows Thermobank and highside installation.

## HOW TO GET THE MOST OUT OF SUNISO REFRIGERATION OILS



**SUNISO OIL** comes to you clean and dry—less than 26 parts of moisture per million parts of oil. Keep it that way for best results. Pry off the airtight seal with clean tools. Replace the cap immediately after drawing off the oil, thus keeping the remainder from absorbing moisture from the atmosphere.



**CHARGING COMPRESSORS** sometimes calls for a funnel or a piece of tubing; make sure they're really clean. A little dirt can do a lot of damage to closely machined and fitted parts. If you suspect you've gotten dirt into the oil, discard it. Your reputation is worth more than a can of oil.



**IN CHARGING HERMETICS**, the only way you can do an exact and thorough job is to use a well-designed charging board. Proper maintenance of this equipment is important. To be sure of getting the long, trouble-free service for which hermetics are noted, keep supply tank, tubing and valves as clean as you possibly can.



**INSTALL A DRIER** whenever you have reason to believe the oil or the system has picked up moisture. Frozen moisture can clog capillaries, expansion valves and other important parts. Properly installed, a silica gel drier—like this one being connected to a domestic unit—is highly efficient. It can save you many a service call-back.

Johnston Refrigeration, of Detroit, has used Suniso exclusively for over 14 years. Johnston has never had wax or sludge problems, and this has given the firm an edge over competitors using other oils. Many of the units serviced by the organization have not had to be recharged in over 12 years even though some of the boxes operate constantly at -35 F. A free booklet describing the various grades of Suniso Refrigeration Oils is yours for the asking. Call the nearest Sun office or write SUN OIL COMPANY, Philadelphia 3, Pa., Dept. AC-12.

**NATIONALLY AVAILABLE.** Genuine Suniso can be purchased through authorized KELVINATOR dealers and through wholesalers supplied by VIRGINIA SMELTING COMPANY.

### SUNISO REFRIGERATION OILS

SUN OIL COMPANY, PHILADELPHIA 3, PA. • SUN OIL COMPANY, LTD., TORONTO AND MONTREAL



## 2 Independent Systems Refrigerate Turkeys During Processing

ATHENS, Ill.—Two independent, automatic 5-hp. refrigeration systems assure protection of the 11,000 turkeys processed yearly at Lincoln Trail Turkey Farm here.

Independent operation, it is pointed out, allows defrosting of one system while the other holds the box temperature, "thus accomplishing as constant temperature as possible."

Use of two systems also gives added insurance. In the event of a breakdown of one system, the other will prevent spoilage of the turkeys while repairs are being made. Temperature is controlled by thermostats connected to solenoid valves in the liquid line.

Another feature of the installation, which includes two Kramer Trenton RC500 "Unicon" air-cooled condensers, two Kramer Trenton #12 "Thermobank" combination evaporator systems, and two Brunner 5-hp. compressor units, is the arrangement of the Unicons to serve a second purpose:

By the use of a simple damper arrangement, the air for the Unicon can be supplied from the outside or inside. During the summer, by removing the air from the inside, Owner W. Wilson is able to ventilate the working area at no extra cost.

Pressure controls were installed to raise the head pressure by stopping the Unicon fans when needed during winter operation.

The installation maintains temperatures of 30° F. for chilling and -10° F. for freezing and storage. George Smith of George Smith & Sons, Springfield, Ill., handled the installation, which was purchased through U. S. Electric Co.

### JUST ASK US!

Turn to "What's New" Page for useful information on new products.

## DEAN "Job Tailored" GOLD PLATES



Save time... save money! Any size, any shape, most metals! More and more the choice of conscientious refrigeration engineers. Get the full details today!

WRITE FOR TECHNICAL DATA BOOK

**DEAN** Sterling 9-5400 PRODUCTS, INC. 1042 DEAN ST. • BROOKLYN 16, N. Y.





## TELLING and SELLING

A guide to smart advertising  
and merchandising practices.

By James D. Woolf

No doubt you have had the experience, more than once, of seeing no traceable sales results after running an advertisement (or a series of ads) in your local newspaper, or possibly after broadcasting a series of radio commercials.

And then, perhaps, you have wondered if it really pays to advertise. You have heard exciting stories of advertising successes, but in your own case you have witnessed nothing spectacular.

Except in special situations (mail-order promotions for example) the value of your advertising program should not be measured solely on the basis of immediate, visible, dollar-and-cents returns.

Of course, as I have always insisted in this column, quick results are what you should shoot for. I have little use for advertising that is undertaken exclusively for its so-called "reminder" value.

If you are in the business of selling merchandise (as against some sort of intangible service), each piece of copy you print should supply the reader or listener with sufficient product information to effect the sale. It should describe factually the important features of the product and, most important, advance credible reasons how the consumer will be benefited if he buys it.

By all means, except in very special cases, your copy should include the price of the product and the terms of payment.

If it is possible for any ad to produce immediate sales for you, the



Quick response is what you want.

kind of copy I have just described will do it.

Surely it has a far better chance to make a sale than a vague, non-informative "reminder" ad, no matter how "clever" it may be.

But if the kind of ad I advocate doesn't pay off on the barrelhead, in terms of direct results, its indirect results will be far greater than you could possibly expect from an empty, meaningless "reminder."

There is always the possibility that your readers or listeners will remember the persuasive and convincing specific things you have said about your product. They will not remember generalities.

Isn't it true that you, as a consumer, are sold on a number of things that you intend to buy one of these days? You are not ready to buy right now, for one reason or another, but you have been persuaded and convinced by selling copy.

It is impossible for copy that is strictly "reminder" to give anybody a real, deepdown conviction about a product.

As most of my readers know, my definition of advertising is "Salesmanship in Print." This does not

mean that I place no value on indirect results. The long-haul dividends that advertising pays are, of course, an important consideration.

But too many advertisers, unhappy about their direct results, quit trying for immediate returns. They slip into an indifferent attitude toward their advertising, handle it in a careless and slipshod way, and run copy hardly worthy of a high school freshman. "Oh, what's the difference," they shrug. "All I'm trying to do is to keep my name before the public."

Salesmanship in Print is respected by the reader—provided it's honest salesmanship. No consumer will ever be offended by advertisers who give him dependable information in the manner of one sensible, fully-matured adult talking to another.

Even though you set great store by indirect results, keep on trying for direct sales. Babe Ruth was never willing to settle for anything less than a homer. He was always in there swinging for direct results with everything he had. Sometimes he struck out, and sometimes—in fact, very often—he'd get a free walk to the bag. Those gift passes were the result of his mighty reputation



Babe Ruth never settled for less than a homer.

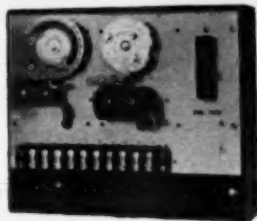
as a fence-buster.

Don't quit advertising if every ad you run isn't a homer. Some of them will be if you swing with all you've got. Advertising really is Salesmanship in Print, at least some of the time, when it is planned and written with intelligence and enthusiasm.

There is no reason in the world, in my book, why the objective of your advertising should be solely that of "reminder."

Give your readers or listeners "the works" every time you spend a dollar for space or time. Competition for the consumer's take-home pay is going to be terrific from now on in.

## PARAGON DEFROSTING TIME SWITCHES



### CHRONO-SPRAY Defrosting Control For Water-Spray Defrosting IT'S FAIL-SAFE!

- A completely flexible defrosting control for Locker Plants, Breweries, Dairies, Walk-In Boxes, Unit Coolers, Air Conditioning.
- A synchronous motored combination 24-hour Time Switch and 60-minute Timer especially designed for water-spray defrosting.
- Provides from 1 to 24 defrost periods per day. Also controls defrost duration in three separate adjustable periods: delay; water-spray; drain.
- "Fail-safe" feature prevents possibility of evaporator fans running while unit is being defrosted. Complete flexibility with utmost simplicity.

### Paragon 300 Series For All Types of Commercial Defrosting:

- COMPRESSOR SHUT-DOWN
- ELECTRIC-HEATER DEFROSTING
- HOT GAS OR REVERSE CYCLE

An accurate, durable, precision-built time switch for all types of commercial defrosting applications where defrost is two hours or less. Easy-to-set pin-type dial. Heavy hinged case; unbreakable door glass. Also made in heavy-duty outdoor type, Series 330.



for

UNIT COOLERS • WALK-IN-BOXES  
FROZEN-FOOD DISPLAY CABINETS  
LOCKER PLANTS • REACH-IN BOXES  
FUR-STORAGE VAULTS

Made by America's Largest Exclusive  
Manufacturer of Time-Controls  
for All Uses.

MAKERS OF THE FAMOUS  
de-frost-it

FOR DOMESTIC  
REFRIGERATORS - ONLY \$9.95

PARAGON ELECTRIC COMPANY

1467 TWELFTH STREET • TWO RIVERS, WIS.



## Of things to come


FOR a lot of people this is inventory time. But it's time, too, to take another kind of inventory—an inventory of ideas, of accomplishments—and of things to come.

If you're a Frigidaire dealer, here are some of the more important things that the past year has brought you. First and foremost, Frigidaire brought you the sensational Cyclamatic Frigidaire, with its Cyclamatic Defrosting, Roll-to-You Shelves, and a true Food Freezer-Refrigerator Combination. Also, Frigidaire gave you the unique and much-in-demand Filtra-matic Clothes Dryer, a completely new line of Food Freezers, the new Frigidaire Automatic Washer with Float-Over washing and rinsing, and a line of electric ranges that set a new standard for the industry. Add to this the complete

line of Electric Water Heaters, the Prestoe-Matic Electric Ironer, the amazing Electric Dehumidifier, and the full line of Window Air Conditioners . . . and you have a product line-up that just can't be matched!

And, what of the future? Well, let the past forecast the future for you. Let the prestige, the profit, and the products of Frigidaire's past give you an inkling of what is to come.

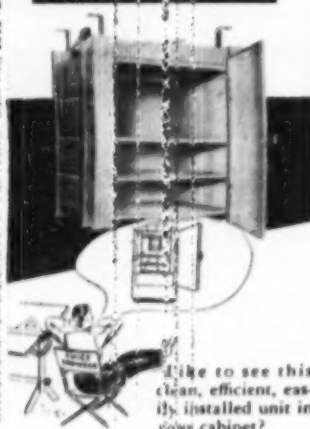
For great things will come to Frigidaire dealers tomorrow, next year, in the next decade. These are things that just automatically go with the Frigidaire Franchise.

 Frigidaire Appliances

## Tenney's

on the move!  
...with the best in ice-cube  
molders for

### MANUFACTURERS



Like to see this  
clean, efficient, easily  
installed unit in  
your cabinet?

Take it over with

**Tenney**

ENGINEERING, INCORPORATED  
Newark, New Jersey

### NEW PRODUCTS?

Turn to "What's New" Page for  
useful information on new products.

## 'Pre-Pared' Potatoes

Use of Refrigeration In Processing Helps To  
Make 'Tarnish-Proof' Spuds Possible

NEW ORLEANS—There's a new  
kind of potato on the market today.

It's a potato that saves time and  
labor loss, is the acme of efficiency,  
possesses high quality, comes peeled,  
ready to cook, and creates no dirt or  
garbage.

But its biggest asset is the fact  
that it doesn't spoil after peeling. For  
which thanks are due to a large extent  
to refrigeration.

Known as the "Pre-Pared Potato,"  
much of its early publicity frankly  
stated that the already-peeled potato  
would keep for several days without  
refrigeration. It was never announced  
that it is refrigeration during  
production phase which makes a  
"tarnish-proof" spud possible.

Here's how it happens at the Brennan  
Pre-Pared Potato Co. in New Orleans,  
which is licensed to use a secret process  
and treating solution under patents  
controlled by Miller's Prepared Potato Co. of Blue Island,  
Ill.

Potatoes arrive at the warehouse  
in carload lots, for this is no small  
enterprise. Into large automatic peeling  
machines go the spuds on the  
first leg of a quick production journey.  
Here they are machine peeled and  
scrubbed with a hot caustic solution,  
next washed free of the caustic, then  
popped onto a conveyor where workers  
gouge out potato eyes and other potato waste.

Then, still aboard the conveyor, the

potatoes move through an automatic  
slicer, that is, only if they're to  
eventually wind up as French fries,  
and then into a large, slowly rotating  
drum.

It's in this drum that mechanical  
cooling comes into the play, making  
possible a peeled potato ready for  
use and in excellent condition for  
days, without deterioration.

In this drum the potatoes are  
immersed for several minutes in a bath  
of a secret solution chilled to a specific  
low temperature. It's the treating  
solution correctly chilled which  
rapidly removes the heat picked up  
by the spuds during the hot caustic  
peeling operation and cools them well  
below normal room temperature.

To refrigerate the solution uniformly,  
John T. Brennan, president of the firm  
bearing his name, installed a York "High-K" cooler.

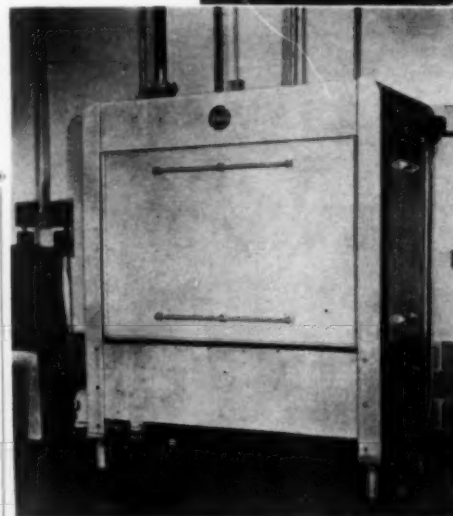
Continuous circulation of the treating  
solution over the cooler and then  
through the bath or tank where the  
revolving drum carries the potatoes  
through the solution assures proper  
cooling and uniformity.

To restaurant owners the prepared  
potato has meant the end of potato  
peeling machines plus the labor and  
time spent removing skins and eyes.  
To the housewife it can mean less work  
at the kitchen sink.

Statistics show that many a restaurant  
has cut potato costs as much as 30%  
by using peeled potatoes.

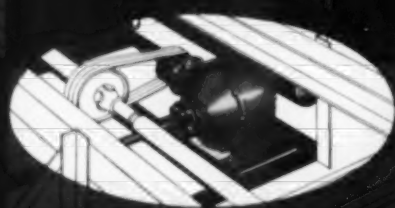
## Commercial Refrigeration

RIGHT: John T. Brennan  
of the Brennan Pre-Pared  
Potato Co., New Orleans,  
La., inspects the 30-lb.  
bags of "pre-pared"  
French fries in the cold  
storage room. A York unit  
cooler, installed by Gulf-  
York, Inc., York Corp. distributor in New Orleans,  
is shown at the top of  
the photograph.



LEFT: York High-K cooler  
which cools the secret  
treating solution used to  
cool the "pre-pared" potatoes.

**now!** a perfected and  
simplified mobile  
refrigeration unit



**KOLD-HOLD**

Truck refrigeration can now be as fully automatic and  
dependable as stationary plant systems. The Kold-  
Hold "Kold-Trux" unit refrigerates while you drive  
to maintain any temperature from -10° to +50° as  
long as you want it. It builds refrigeration so smoothly  
the driver can't tell it's there. For complete details  
send for the new Kold-Trux Bulletin.

FULLY AUTOMATIC  
POSITIVE TEMPERATURE CONTROL  
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FIELD PROVEN THROUGH YEARS OF USE

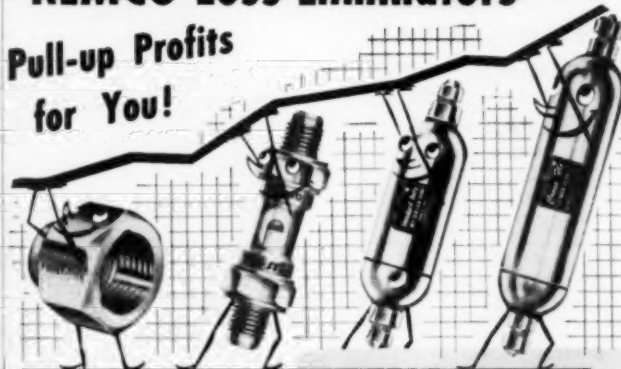
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KOLD-HOLD MANUFACTURING COMPANY

product's every step of the way  
Sum. 2, Laurel St., Lansing 4, Michigan

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Pull-up Profits  
for You!



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Frost-relieved Flare Nuts,  
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or crack. A must for lowside  
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100% foolproof Liquid Indicators.  
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The lowest-cost, most efficient  
molded driers on the market.  
Ideal for use by original equipment  
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either Molded REMCAL or  
granular Silica Gel. Cap. 1/4 to  
1 1/2 HP.

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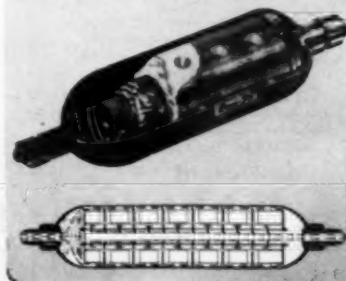
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EFFICIENT DRIER-FILTER MADE!

New Cross-Flo is now greatly improved — with new REMCAL super-strength drying element, and new FIBERGLAS Depth Filter. New Cross-Flo guarantees increased flow area, increased moisture-absorbing capacity, increased filtering capacity, all-around improved efficiency that positively does away with pressure drop, premature clogging, and plugging. See it now at your wholesalers.







## 'Try It and See' Technique Sells 14 Room Coolers In Texas Town of 2,000

MART, Texas—Encouraging farmers and ranchers to "try one out at home," sold a volume of 14 1-ton room air conditioners during the summer for Lloyd Anderson, head of Lloyd Anderson Lumber Co., building materials dealer here.

Normally, the sale of 14 package units would not seem outstanding. But Mart is a tiny community of 2,200 people, out in the central Texas cottonlands. In view of this, the volume is a real achievement.

Operating a well-equipped service shop and appliance department in conjunction with his building materials business, Anderson from the beginning of 1952 went after the "farm market." There was good reason for this because most central Texas farmers have prospered through both agriculture and livestock. The cotton crop was above average for 1952, despite serious drought, and beef prices hit a new high. Thus, both ranchers and cotton growers were well able to afford air conditioning, Anderson reasoned.

He also figured that most of the farmers who came into Mart on Saturdays came to town with truck or

wagon, capable of carrying a package conditioner. Thus, as soon as a farmer coming into the Anderson Lumber Co. for lumber, hardware items, or tools, showed any interest in a package cooler, he was invited to "try one out at home."

The Texas lumberman was vehement about it, assuring half-way convinced farmers that no obligation was involved, and asking them to allow the unit to be loaded in their own trucks. This got the room cooler to the farm home successfully, where an Anderson representative could handle the installation with the farmer's help.

Net result was as many as eight room coolers loaned out over the weekend, when the farm or ranch family was likely to be spending a day at home. With the central Texas temperature soaring above 100 for 50 days without a break, the coolers effectively "sold themselves," Anderson reports. Rarely was it necessary for him to pick up the cooler for return to the firm.

"At least three fourths of such prospects are sure that they cannot cool old farm houses with package units," he smiled. "The only answer to this attitude, we have found, is on-the-spot demonstration. Getting the farmers to help us out with the installation and learning something about the units in the process, wiped out a lot of other sales resistance."

### Warren-Connelly Takes on 'Vornado' Air Conditioners

WICHITA, Kans.—Appointment of Warren-Connelly Co., Inc., New York City, as exclusive distributor in the New York area for "Vornado" air conditioners was jointly confirmed by O. A. Sutton, president of O. A. Sutton Corp. here, and E. L. Frohlich, vice president and general sales manager of Warren-Connelly Co.

The 1953 line of Vornado air conditioners will include both  $\frac{1}{2}$  and  $\frac{1}{4}$ -hp. models, the manufacturer stated. Each unit includes such features as styling in harmonizing colors and air circulators "which not only direct the refrigerated air in any direction but also permit penetration of the cold air up to 30 ft. in the room for rapid cooling."

## Frigidaire Adds $\frac{1}{3}$ and $\frac{3}{4}$ -Hp. Models to New Room Cooler Line

### Twin Compressors Are Feature of 2 Top Models

DAYTON—Some details on the new four-model line of room air conditioners introduced recently by Frigidaire Div., General Motors Corp. have been released by the company.

The line now includes models of  $\frac{1}{3}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ , and 1-hp. sizes. The  $\frac{1}{3}$  and  $\frac{1}{2}$ -hp. sizes are new this year. The units have been named according to their horsepower rating and will be known as the "Super-33," "Super-50," "Twin-75," and "Twin-100."

All four models perform the functions of true air conditioning by providing fresh air, exhausting, circulating, filtering, and dehumidification.

They are similar in outward appearance and design to the present models and are completely self-contained and easy to install. Controls are located on top of the unit with 4-way adjustable louvers and vanes at the top front to direct air to any part of the room.

The Super-33 and 50 have one Meter-Miser, while the Twin-75 and 100 models have two Meter-Miser refrigeration systems, providing exclusive "Selective Cooling."

This cooling operation is said to be more economical and versatile, because one or both of the twin Meter-Miser compressors can be operated, depending upon outside weather conditions.

One of the Meter-Miser units supplies adequate capacity to cool and



TWINS POINT TO TWINS—Alice and Ann Bokankoff show how two Meter-Miser compressors operate in Frigidaire's  $\frac{3}{4}$  and 1-hp. room air conditioners. Compressors permit "selective cooling," hence economy, by operating one or both depending on weather conditions.

dehumidify a room during the night or in temperate weather. However, during extremely hot days both can be operated simultaneously to handle the increased air conditioning load.

Also, on all models, the blower fan can be operated by itself to provide air circulation only. Units project only 13 in. into room and are finished in a dove gray enamel.

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methods developed for air conditioning all types of commercial and public buildings, industrial plants, and homes... compare hundreds of new improved items, large and small... find cost-saving solutions to your problems by discussing them with engineering specialists. You'll be MONTHS AHEAD in FIVE DAYS.

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**SOLENOID VALVES**  
Provide Complete Interchangeability of Coil Assembly...

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ONE Plunger

... fits every J-E Solenoid Valve, from 3 tons to 400 tons of refrigeration. Think of all the confusion and delay this will save you!

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- TIGHT SEATING — NO BUBBLE TOLERANCE
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# They'll Do It Every Time . . . . By Jimmy Hatlo



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"I have always felt that whatever the Divine Providence permitted to occur I was not too proud to report. The people are not served by pussyfooting, or by that sort of journalism in which nobody will ask who is the editor of a paper or the writer of an article, and nobody will care."—Charles A. Dana.

## How Bright Is the Future Of Air Conditioning?

(Concluded from Page 1)

of today's city dweller will be considered an interesting bit of medical history of the early and mid-Twentieth Century. Disease germs carried in the air will no longer be encountered in the places where people work and live."

Sounds wonderful, doesn't it? If you've had your ear cocked to ground rumblings in the air conditioning industry, you'll know that this business is ready to erupt into explosive sales.

As a virtually interested observer of the air conditioning industry for 26 years, AIR CONDITIONING & REFRIGERATION NEWS has recorded and reported a plodding up-and-down sales pace most of the time.

If you'll allow us a sports simile, we have been a combination of umpire and coach. As an umpire we have "called them as we've seen them." As a coach (and industry spokesman) we have exposed and delineated new or overlooked air conditioning markets.

By example and by suggestion, we have urged NEWS subscribers to sell air conditioning to the American public as a year-round necessity, rather than a hot weather gimmick or short-term promotional freak.

After a season of protracted steaming weather in 1952, we now hear our early and repeated words echoed by others. Predictions come from everywhere that air conditioning will achieve the pie-in-the-sky magnitude predicted for it every year 'way back to the time when AIR CONDITIONING & REFRIGERATION NEWS began to promote it.

We go along with this rosy view, of course. And it's about time that our Crusade for Air Conditioning as a Major Industry should pay off for its advocates and believers! Like never-say-die stalwarts of the Republican Party, our patience has been tried sorely in the last 20 years. But now we are glad that we kept the faith and stuck stubbornly to our convictions.

Designing engineers, distributors, dealers, contractors, wholesalers, and service organizations who also have "kept the faith" will own a leading role in this unfolding drama. (Incidentally, these firms subscribe almost 100% to AIR CONDITIONING & REFRIGERATION NEWS.)

Air conditioning specialists who read and trust the NEWS have a sure and thorough knowledge of the installation, use, and servicing of air conditioning equipment. They have suffered through the sometimes thankless tasks of promoting and gandy-dance pricing, fighting through government restrictions, and the headaches of service and maintenance.

From the time it was an expensive novelty, to its present acceptance on the part of an eager public, they have been air conditioning PIONEERS.

Theirs is a knowledge and experience which cannot be duplicated.

We repeat that YOU, Mr. Subscriber, are needed—and not only to install and service residential systems, but also to lead the way in promoting and selling such equipment to laggard commercial and industrial buyers.

Don't settle for the poor half of a loaf! Capitalize on your proven abilities! Act now to claim your rightful place in the rapid expansion of the entire air conditioning business!

Nobody else can do it so well.

## Have You READ 'Peace and Progress' Yet?

Your No.1 DEMAND...

the CONDENSER must be

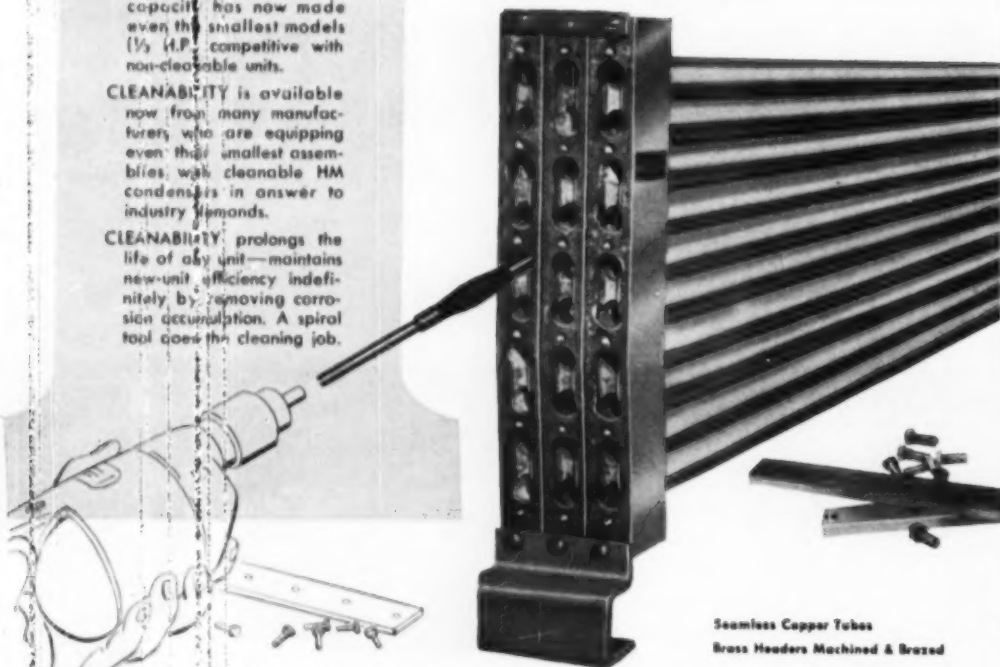
# CLEANABLE

Because...

CLEANABILITY costs no more in the new HM condensers. Tremendous productive capacity has now made even the smallest models 1 1/2 H.P. competitive with non-cleanable units.

CLEANABILITY is available now from many manufacturers who are equipping even their smallest assemblies with cleanable HM condensers in answer to industry demands.

CLEANABILITY prolongs the life of any unit—maintains new-unit efficiency indefinitely by removing corrosion accumulation. A spiral tool does the cleaning job.



Seamless Copper Tubes  
Brass Headers Machined & Brazed

Why not insist that your next unit have a CLEANABLE water-cooled condenser?

Especially since leading manufacturers, one after the other, are recognizing the advantages of accessibility to cleaning and are equipping their units accordingly.

They realize that initial purchase cost is no higher, and longer life and more economical performance are guaranteed. The CLEANABLE feature enables you to recover new-unit efficiency and thus maintain 100% economical operation indefinitely. In Halstead & Mitchell Cleanable Condensers, water tubes are accessible from both ends on all size models 1/2 through 25 ton—all water cooled, double tube, counter flow.



Halstead & Mitchell

Wholesalers in Principal Cities Write for descriptive literature

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## Service & Supplies

### Refrigeration Wholesaler's Inventories, Sales Show Slight Decline from Year Ago

WASHINGTON, D. C.—September sales of appliances and specialties wholesalers advanced 1% over the same month of 1951 and were up 25% compared with August, according to the Bureau of the Census.

Refrigeration equipment and parts wholesalers, however, reported sales off 2% from a year ago and 7% from August.

For the first nine months of 1952, sales of appliance and specialties wholesalers declined 10% compared with the like 1951 period, and those of refrigeration equipment and parts wholesalers slipped 3%.

Inventories of appliances and spe-

cialties wholesalers at the end of September were down 22% from the year-ago level and unchanged from August.

Stocks of the equipment and parts group decreased 6% compared with the end of September, 1951, and increased 2% from August.

September sales of U. S. wholesalers as a group rose 8% above both September, 1951, and August, but their sales for the first nine months lagged 1% behind the like period of last year. Inventories on Sept. 30 were 1% above the Aug. 31 level but declined 11% from the end of September, 1951.

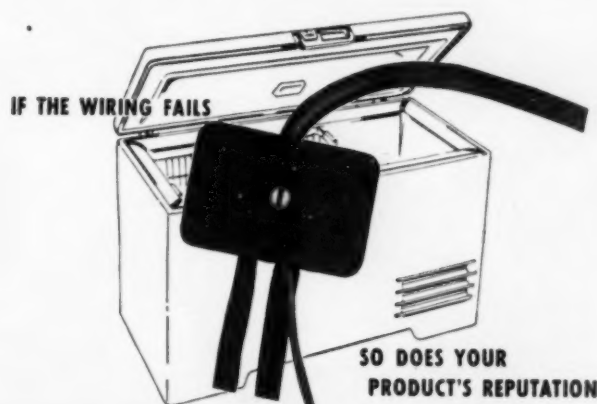
#### Sales

Kind of Business and Geographic Division	Per Cent Change		Sept. 1952 Panel	No. of Firms Reporting	Reported Dollar Values (add 000)
	Sept. 1952 from Sept. 1951	Aug. 1952 from Sept. 1951			
Appliances and specialties wholesalers	+1	+25	-10	314	26,802
New England	+40	+22	-14	6	1,186
Middle Atlantic	-11	+29	-22	25	10,367
East North Central	+13	+37	-16	30	4,276
West North Central	+3	+17	-9	11	1,213
South Atlantic	+6	+13	+11	21	4,420
South Central	+2	+1	+10	12	1,643
Mountain	+35	+33	+7	6	1,323
Pacific	+8	+6	0	13	2,874
Refrigeration equipment, parts (com'l)	-2	-7	-3	77	2,058
Middle Atlantic	-20	-7	-5	12	438
East North Central	-8	-20	-5	23	299
South Atlantic	+13	+3	+3	22	1,773
South Central	-11	-45	+18	4	140
Pacific	+10	-8	-7	9	255

#### Inventory, End-of-Month (At Cost)

Kind of Business and Geographic Division	Per Cent Change		Sept. 1952 Panel	No. of Firms Reporting	Reported Dollar Values (add 000)
	Sept. 1952 from Sept. 1951	Aug. 1952 from Sept. 1951			
Appliances and specialties wholesalers	-22	9	9	30	22,563
New England	-5	-14	5	5	928
Middle Atlantic	-30	+10	16	6	580
East North Central	-20	-6	15	3	3,676
West North Central	-34	-1	11	1	2,066
South Atlantic	-9	-1	17	3	3,763
South Central	-19	+4	10	1	2,111
Mountain	-18	-6	6	1	1,130
Pacific	-12	-18	10	1	2,319
Refrigeration equipment, parts (com'l)	-6	+2	68	4	4,523
Middle Atlantic	-13	+3	11	1	941
East North Central	-12	0	18	1	810
South Atlantic	+5	+3	22	1	1,442
South Central	+	+	+	+	+
Pacific	-13	-1	8	1	554

\*Insufficient data to show separately.



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### Chase Brass and Copper Transfers Stroth, Meyer

WATERBURY, Conn.—Ralph H. Stroth, formerly assistant manager, Cincinnati district for Chase Brass & Copper Co., Inc., subsidiary of Kennecott Copper Corp., has been appointed Indianapolis district manager for Chase according to W. C. Gram, central regional manager.

He will have charge of sales in the Indianapolis territory, comprising most of Indiana, and will supervise the Chase Indianapolis warehouse.

Stroth joined the Chase sales staff at Cleveland in 1926. In 1944, he was appointed assistant Cincinnati district manager.

Vincent Meyer, formerly Indianapolis district manager, has been appointed to the Chicago district sales office. He has been associated with Chase since 1926, serving as district manager at Indianapolis since 1945.

### M-H Names McRoberts As Market Supervisor

MINNEAPOLIS—Leo C. McRoberts has been promoted from account executive by Minneapolis-Honeywell Regulator Co. to market supervisor in the appliance controls division, it was announced recently by vice president John E. Haines.

McRoberts will direct sales of automatic control equipment made in the firm's Los Angeles plant for the expanding space heater market, Haines said.

### Allen-Bradley Sales Conference

ONE HUNDRED and sixty-one distributors of Allen-Bradley motor controls and 115 home office management and design executives met for a four-day sales conference at Nippersink Manor, Genoa City, Wisconsin recently. Shown above is Les C. Watson, manager of distributor sales, handing diplomas to the visiting jobbers' salesmen at the close of the conference. Flanking him in the rear of the picture are F. F. Lock, president, and J. J. Mellon, chief engineer of Allen-Bradley Co.

### Cutler-Hammer Names 2 To Industrial Sales Posts

MILWAUKEE—P. S. Jones, vice president in charge of sales, Cutler-Hammer, Inc., has announced the appointment of M. R. Brice as division manager, industrial control sales.

Jones also made known the appointment of K. M. Nelson as division manager, industrial control sales. Nelson will have sales responsibility for a segment of the company's industrial control line.

Brice has served in the Cutler-Hammer engineering departments, headquarters sales, the St. Louis dis-

tributor sales office, and as an industrial specialist.

Nelson joined the Cutler-Hammer engineering department in 1942 after graduating from the University of Michigan and was transferred in 1946 to the resale sales division as an industry specialist.

### Roche & Hull Opens Larger Branch In Salisbury, Md.

BALTIMORE—Formal opening of its new and larger branch store at Lee and Cooper Sts. in Salisbury, Md. was recently announced by Roche & Hull, Inc., refrigeration equipment wholesaler here.

# "Service Costs Much Lower... than any other refrigeration equipment we have yet handled"

—says Tibor Weiss, President, Interstate Equipment, Inc., St. Louis, Mo.

Outstanding performance — plus lower service costs — convince large Mississippi Valley distributor that Kelvinator condensing units are tops in the field.

### INTERSTATE EQUIPMENT, INC.

DISTRIBUTORS OF  
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April 14, 1952

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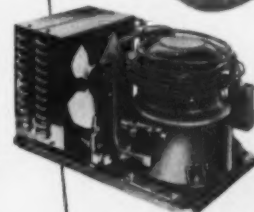
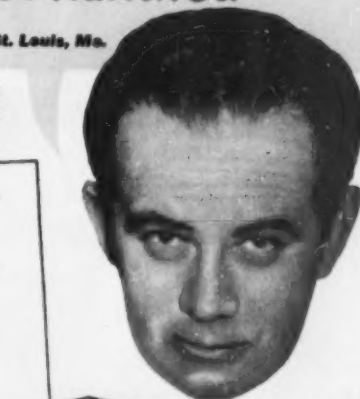
One year ago we started handling Kelvinator commercial products which we have been purchasing from the Saint Louis Branch. We feel that one year is long enough to "tell the story". After carefully analyzing the results we have had with your products, I am very pleased to state, they not only measure up to expectations, but exceed them by far.

We are very well pleased with the performance of your equipment, and we are especially pleased with the fact that our service cost on Kelvinator equipment, percentage-wise, is much lower than that of any other equipment we have yet handled. We have been handling nationally known products.

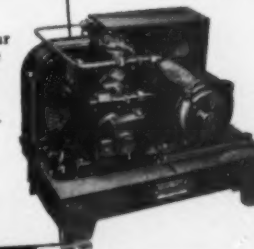
I would like to go on record saying that we are very happy with our decision of a year ago, to handle Kelvinator products, and that we are looking forward to a long, profitable and mutually beneficial relationship.

Sincerely yours,  
INTERSTATE EQUIPMENT, INC.

Tibor Weiss  
Tibor Weiss, President



See the selection of 16 Kelvinator Hermetic models, up to and including 1/2 H. P. (including new FREON-22 models). Five year warranty (optional).



See the complete range of Kelvinator open-type condensing units—ranging from 1/4 H. P. up to and including 3 H. P.

Profit Today... Build for Tomorrow with

# Kelvinator

The Name that Sells... The Name that Satisfies!



Kelvinator Beverage Coolers



Kelvinator Food Merchandisers



Kelvinator Water Coolers



Kelvinator Ice Cream Cabinets



Kelvinator Refrigerators



**THE GREATEST ERA OF EXPANSION  
IN AIR CONDITIONING HISTORY**



# ON THE THRESHOLD OF ITS GREATEST GROWTH

. . . the air conditioning industry reached its highest sales peak this year. A uniformly hot summer throughout the nation caused air conditioning to be regarded as more of a necessity — less of a luxury. This new attitude has given impetus to one of the industry's most interesting developments:

## YEAR-ROUND RESIDENTIAL AIR CONDITIONING

NOW is the time for action — and our readers have sounded an urgent appeal for current information on this fast-growing segment of the air conditioning field.

With the true championship spirit that has characterized AIR CONDITIONING & REFRIGERATION NEWS for the past twenty-six years, the NEWS again will lead the way. NEWS coverage will be expanded to include this entire field — its products . . . its mechanical and service techniques . . . its merchandising methods, designed for profit.

Every phase of refrigeration and air conditioning will receive complete, unequalled, and unduplicated *weekly* coverage — the only type of coverage that can keep our readers abreast of the galvanic events to come.

## SOME MANUFACTURERS WILL SURVIVE

If history provides a true criterion, it can be prophesied that three years hence, many manufacturers who are now entering the year-round residential air conditioning field will have hung a "for sale" sign on their doors. Only those who build on a solid foundation will stand and prosper.

AIR CONDITIONING & REFRIGERATION NEWS is prepared to be the industry's "man, Friday." The NEWS provides an expedient vehicle to help you set up a sound distribution program — for accessory equipment, as well as complete units.

The most experienced men in the air conditioning industry — in distribution, sales, installation, service — comprise the audience reached by the NEWS. These are the men upon whom you must depend to insure expert handling of your product from the factory to the consumer . . . and to the consumer's satisfaction through service.

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## INSIDE DOPE

by GEORGE F. KUBENECK

(Continued from Page 1, Column 1)  
He founded a family fortune, and  
the industry.

### Good Burt Rossmagel

To show what kind of a man "Hon-  
or" Abe Lincoln was, they tell the  
story of how he walked a mile to  
return a few pennies change to a  
customer.

To show what kind of a man Burt  
Rossmagel, Henry Valve representa-  
tive in Dayton, is, we give you this  
true tale.

Burt, though he lives in Dayton, is  
a member of the American Legion  
Shawnee Post in Louisville, some 200  
miles down yonder. And he is no  
member in absentia. Burt takes an  
active part in his post's activities.

Not long ago the Shawnee post  
staged its fifth drive to collect blood  
for the Red Cross. Chairman H. H.  
Shuell of the post's blood program  
committee established a quota of 270  
gallons. He worked hard to make his  
quota, but ended up with only 269  
gallons. Then he thought of Burt up  
in Dayton.

"We need you to donate a pint of  
blood," Shuell long distanced to Burt.  
"If we don't get it, we'll fall down  
on our project. Just in your car  
and drive over."

Burt might have said "Are you  
kiddin', Mac?" or he might have  
pleaded pressure on other business.  
But he didn't. He pushed the accelera-  
tor down and arrived in Louisville at  
5 p.m. He was bled at 4 p.m. He ate  
a steak—the reward of all donors to  
the drive—and at 5:30 p.m. he headed  
his car back for Dayton and home.

How's that for loyalty?

### This Is YOUR Business

Although pressure for Socialism  
and Communism aren't so strong now  
temporarily, the fight for busi-  
ness freedom and prosperity is far  
from won.

A magnetic personality (Eisen-  
hower) cheeked the socialistic  
tide for awhile. How long will this

"better climate" for Business and  
businessmen last?

Only so long as voters—women,  
youths, "undecideds," and minority  
groups—feel that they can trust  
businessmen and their Philosophy of  
Free Enterprise.

This wondrous "philosophy" is ex-  
plained and popularized in an easy-  
to-read book: *Peace and Progress*.  
Here's how some of your canny and  
intelligent friends appraise it:

"To me, this is a presentation of  
the American Way of Life that is  
down-to-earth—that can set thou-  
sands of people straight in their  
thinking—that can help to counter-  
act many of the forces that have been  
pushing us closer and closer to  
Socialism. I'm not alone in my  
opinion. For example, the president  
of a large manufacturing client or-  
dered copies for his employees, each  
teacher and minister in the town, and  
for every member of the high school's  
June graduating class.

"If others' reactions are anything  
like mine, they may also want to  
help start the ball rolling in getting  
thousands—and, eventually, possibly  
millions—to realize that there is a  
way out of the 'fix we're in.' By get-  
ting people to read this book, talk  
about it, and quote from it, we will  
have a good start in the right direc-  
tion."—CHARLES M. GRAY, Chas. M.  
Gray & Associates.

"I have read *Peace and Progress*  
from cover to cover. You're just like  
good whiskey. George, you improve  
with age! This is the best book you  
have ever written. Congratulations!"  
—HY JARVIS, Refrigeration Engineer-  
ing, Inc., Los Angeles.

"I am happy to say that I agree  
with most of your ideas and believe  
that you have marshalled up as  
potent a series of arguments for free  
enterprise as it is possible for any-  
one to do."—HARRY ALTER, Chicago, Ill.

"The book is too good to ignore. It  
has a great deal of substance in it."  
—HARVEY CAMPBELL, Detroit Board of  
Commerce.

"In your usual clear and forceful  
style, you did a fine job of showing  
the depths to which we have slipped.  
I say 'we' for all of us are responsi-  
ble—we get just the kind of govern-  
ment we deserve; no better, no worse.

But we have no right to visit our  
sins, our debts, our stupidities, and  
our profligacies on our children.  
Somehow we must contrive to pre-  
serve their heritage for them—the  
greatest mode of life the world has  
ever known."—PAUL B. RYAN, Mil-  
waukee, Wis.

"You have written a book that is  
both interesting and convincing. I  
read it with pleasure, and gave copies  
of it to my associates who have com-  
mented very favorably."—RAY W.  
SENESKY, Vice President, General  
Mills, Inc., Minneapolis, Minn.

"I have read *Peace and Progress*  
and find it's not only interesting but  
well worth while. As you know, we  
need to bring home to good Ameri-  
cans a refresher course."—WILLIAM  
B. MAGILL, Advertising Mgr., Chry-  
sler Corp., Dayton, Ohio.

"I enjoyed the book very much and  
agree with practically all you say  
therein."—L. J. SORESENSEN, General  
Manager, Deepfreeze, North Chicago,  
Ill.

"Hartest congratulations on be-  
half of your new book, *Peace and  
Progress*.

"I am sure that the compliments  
that I could give you in regard  
would only be echoes of the many  
nice things that have already reached  
you."—HAROLD A. HARTY, Wolverine  
Tub.

"I have read *Peace and Progress*  
and enjoyed it very much. You have  
undertaken a notable assignment and  
I wish we could get every American  
citizen to read it. And a few of the  
Ruskies, too."—K. D. PULCIPHER, N.  
W. Ayer & Son, Inc.

"I like your *Peace and Progress*  
and think it should have the widest  
possible reading."—LOUIS RUTHEN-  
BURG, Serval, Inc.

"The greatest compliment that I  
can think of is to say, 'I wish that I  
had written it.' You have described  
the American way of life with all of  
its failings and fine points, in the  
most logical and convincing manner  
imaginable!

"I feel strongly that *Peace and  
Progress* should be read by every  
American in all walks of life, re-  
gardless of politics or profession. It  
belongs in every high school and  
college in the country as required  
reading.

"I would also like to see *Peace  
and Progress* published in the popular  
25-cent pocket edition, and sold in  
every drugstore and cigar stand  
throughout the country. Only in that  
way do I believe you can get your  
message across to the millions of  
Americans who will be going to the  
polls next November."—J. J. HOL-  
WERDA, Spring Canyon Coal Co., San  
Francisco, Calif.

"*Peace and Progress* was devoured  
by me immediately. It is one of the  
finest and clearest pictures of these  
times along with good advice for a  
solution to our problems."—MRS.  
EDNA M. HAMMONG, Detroit, Mich.



"Slants on Service" is a "package" devised by the NEWS to  
meet the needs of its busy readers in the service and contracting  
business.

### 5 Symptoms Indicate

#### Need for Flushing Coil

When does a coil on a refrigeration  
or air conditioning system need  
flushing?

Any one of five indications give  
notice that such flushing is needed to  
improve system operation, according  
to Richard A. Line, chief engineer  
of Anual Chemical Co.'s Refrigeration  
Div. He lists them as follows:

1. Whenever a compressor unit  
must be replaced because of wear  
or motor burn out.

Worn bearings, cylinder walls,  
pistons, or burned windings mean  
that foreign material has been  
pumped into the system and will  
eventually return to the new com-  
pressor and probably damage it also.

2. Whenever a strainer or drier  
becomes plugged and must be re-  
placed.

This is a sure indication that there  
is a considerable amount of foreign  
material in the system that should  
be removed before further operation  
is attempted.

3. Whenever continual expansion  
valve plugging occurs caused by wax  
separation.

The compressor should be drained  
and flushed and all old oil and sepa-  
rated wax must be flushed from the  
coil before wax free oil is put into  
the compressor.

4. Whenever sludge and decom-  
posed refrigerant is deposited in the

system because of excessive head  
temperature, moisture, or air in the  
system.

The sludges will cause expansion  
valve trouble and when deposited in  
the coil will reduce the efficiency.

5. Whenever a large amount of  
water has found its way into the  
system by breakage of a water  
cooled condenser coil or other acci-  
dental means.

### Winch Lets One Man

#### Install Heavy Coils

One man can easily raise and in-  
stall heavy coils or unit coolers with  
the device which T. C. Alexander,  
Westinghouse commercial dealer in  
Denver, devised some time ago.

It consists of a reversing electric  
motor driving a long shaft with two  
wire cables through a worm gear  
box. These are mounted on a long  
board about 6 in. wide fitted with  
long slots.

To install a coil, the winch is first  
fastened to diagonally opposite coil  
hangers through the slots in the base.  
The two wire cables are next at-  
tached to the coil. A hand switch on  
an extension cord then controls the  
operation of the motor.

When the coil has been raised high  
enough to reach the hangers, it's  
fastened to two of them; the winch  
is removed from the other two, and  
the installation of the coil com-  
pleted.

## For Christmas: Give the Book That Helped Win the 1952 Elections



Are you pleased that the political tide toward Socialism—  
and against Business has halted—temporarily?

Give credit to a brightly-phrased book, *Peace and Progress*.  
Its clear sentences and sound reasoning were utilized by scores  
of speakers, broadcasters and party workers to win the elections.

The fight for Free Enterprise isn't over, however. Our  
businesses and properties and personal philosophy still are in  
danger. Football teams which win a big victory often are defeated  
by a weaker team the following Saturday, because they let down.

For Christmas give *Peace and Progress*—the persuasive Free  
Enterprise Book which helped win the elections—to employees,  
customers, neighbors, and friends.

Keep the ball rolling!



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12-8-52

## Grand Rapids Brass announces NEW edgemount LOCKS, STRIKES AND HINGES



The NEW Edgemount concealed  
strike is flush-mounted on the  
surface of the cabinet... no  
mortising is required... no cutting  
away of metal. The Edgemount is  
designed for all commercial  
refrigerators. Hinge has Oilite  
bushings for permanent lubrication,  
long wear. The Edgemount lock  
features the "When it trips—it  
grips" action.

Write for complete details.

Grand Rapids Brass Company

GRAND RAPIDS, MICHIGAN

## Tenney's on the move!

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makers for  
**SERVICEMEN**



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clean, efficient, well  
engineered unit for  
your customers?

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ENGINEERING, INCORPORATED  
NEWARK, NEW JERSEY





## Current LITERATURE available

To obtain further information on the literature listed below, please refer to key number preceding listing. Please use the "Information Center" form on "What's New" page.

### Koch Catalog Lists 2,000 Items for Lockers, Packers

—KEY NO. N-1220—

KANSAS CITY, Mo.—A full line catalog, General Catalog 77, containing pictures, specifications, prices, and recommended usage on more than 2,000 items for meat packers, locker operators, and food processors and dealers has been issued by Koch Supplies here. The book is intended as a permanent reference book and is completely indexed. Many new products are listed.

### American-Standard Issues Radiator Heating Catalog

—KEY NO. N-1221—

PITTSBURGH—The new American-Standard radiator heating catalog covering the firm's complete line of wet heat equipment has been published by American Radiator and Standard Sanitary Corp.

Equipped with index tabs to enable the user to turn instantly to any section, the catalog lists all information about an individual product in one place. Illustrated with portrait and cut-away views of products and dimensional drawings, Catalog R52 contains full ratings, technical data, and dimensions of all radiator heating equipment made by the firm. No other book or literature is required for selecting, sizing, ordering, or specifying equipment for a wet heat installation.

The new catalog is spiral bound with a sturdy board cover to allow it to lie flat when opened at any page. Catalog R52 is divided into five main sections, with a special introductory section showing typical products in full color. The sections cover boilers, radiation equipment, conversion burners and water heaters, controls and accessories, and application and installation data.

### Don Herold Takes Look at Worthington Corp. Products

—KEY NO. N-1222—

HARRISON, N. J.—Cartoonist-author Don Herold takes a look at Worthington Corp. in a humorous and informative booklet which tells why the name Worthington "means a whale of a lot more than pumps." Subtitled, "Why Worthington Changed Its Name" (from Worthington Pump & Machinery Corp.), the 32-page booklet covers pumps, diesel engines, compressors, engine compressors, air conditioning and refrigeration, steam turbines, steam condensers, steam-jet ejectors, feedwater heaters and deaerators, construction equipment, sheaves and V-belts, welding positioners, industrial mixers, liquid meters, water treating systems, where Worthington is, markets, how Worthington sells, and "Worthington in Our Daily Lives."

Herold takes these products one-by-one and tells what they do, how they work, and the import of it all. Typical of Don's definitions: "A compressor, as I understand it, is something with which you squeeze air until it says 'Uncle!'"

### 'Electric Eye' Bulletin For Process Industries

—KEY NO. N-1223—

BERGENFIELD, N. J.—A new bulletin No. 522 has been issued by the Eas Instrument Co. describing the wide range of application of "electric eyes" directly to process industries.

The bulletin, by means of problem and solution, covers some usual and unusual installations that have been made for instant and accurate monitoring of process flows.

The bulletin points up techniques used for either gases or liquids and describes standard and special instruments. It also includes drawings of sample tank and look boxes.

### Temperature-Humidity Test Chamber Line Described

—KEY NO. N-1224—

NEWARK, N. J.—Tenney Engineering, Inc. announces a new two-color four-page bulletin on its standard line of temperature-humidity test chambers. Chambers covered in this bulletin—Bulletin TR—can simulate temperatures from -100° F. to +200° F. and relative humidities from 20 to 95%.

Specifications give data on heaters, humidification, dehumidification, temperature and humidity controllers, compressor equipment, insulation, exterior construction, access door, air circulation, standard equipment, and optional equipment. Chamber construction information, performance characteristics, and typical applications also are included.

Interior dimensions and temperature ranges for eight different standard model types are tabularized in a specification section. Included also are five pictures showing typical chambers and chamber applications.

### Reprints Available of Article on Wiring Home

—KEY NO. N-1225—

NEW YORK CITY—Reprints of the third instalment of a series of articles being published in *Practical Builder* on pre-wiring homes to protect the buyer are now available from the National Adequate Wiring Bureau at 5 cents per reprint.

This instalment concerns the design principles governing the location of outlets and switches. It was written by Robert W. Neel of the Cincinnati Gas & Electric Co.

The bureau said that it expects to make reprints of all future articles available as soon as they appear.

### Allis-Chalmers Bulletin Covers Frame Type Pumps

—KEY NO. N-1226—

MILWAUKEE — Allis-Chalmers frame type centrifugal pumps designed to handle most ordinary pumping jobs requiring capacities up to 500 g.p.m. and heads as high as 135 ft. are described in a new bulletin released by the Allis-Chalmers Mfg. Co. here.

Built for V-belt drive, the frame type pump can be mounted in a variety of positions and connected to any type of prime mover without difficult alignment problems. Head and capacity can be changed by simply altering sheave size on the V-belt drive.

Cross section diagrams of the three available types of frame type centrifugal pumps showing the unit's rigid cast iron frame, two single row ball bearings, mechanical seal, and slinger and seal assembly, together with performance curves, are included. Copies of "Allis-Chalmers Frame Type Centrifugal Pumps," 52B6691A, are available on request.

### Trion Catalog Gives Details Of Electronic Air Cleaners

—KEY NO. N-1227—

MCKEES ROCKS, Pa.—Trion has published a new and complete 12-page book (Catalog E-60) on electronic air cleaners which it designs and manufactures.

The book contains history, principle of operation, aerosol chart, filter test methods, engineering data, equipment photographs, and suggested specifications for electronic air cleaners.

## PAULSON ENGINEERING NOW OFFERS SALES AND RENTAL DISTRIBUTORSHIPS

### To Qualified Air Conditioning Dealers

#### \*Greatest Profit Making Plan Ever Offered

The Paulson Engineering Company, Inc., operators of the successful PAULSON RENTAL SYSTEM, is now setting up nationwide distributorships on exclusive licensee franchises.

#### The Paulson Rental System Will Mean to You:

①

You will purchase equipment at distributor, low-cost level.

②

You will be able to lease this equipment with all financial arrangements handled by Paulson Engineering Co., Inc.

③

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Famous brazed mild steel tube-on-sheet type... galvanized... super finished... prompt service... low cost... all types.

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Genuine Joe says:  
"Stock WAGNER  
STANDARD ROTORS"



A stock of genuine Wagner interchangeable replacement rotors makes rotor replacement a simple 1-2-3 job... and the exclusive "tell-all" label shows the interchangeability of rotors within a given horsepower on Wagner motors.

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There's always one that's better... and in controls it's Ranco!



Ranco controls cut a fancy sales figure in the refrigeration industry — more Ranco controls are in use than any other kind! Why? Because Ranco controls are available for more than 4,000 replacement installations... because they mean greater customer satisfaction... because servicemen can depend on them to deliver accurate, trouble-free service year after year.

**Ranco Inc.**

COLUMBUS 1, OHIO

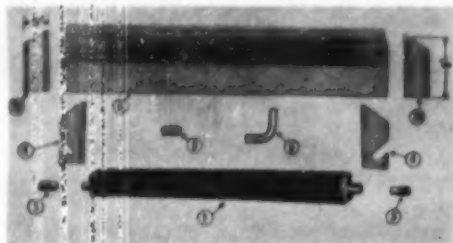
WORLD'S LARGEST MANUFACTURERS OF REFRIGERATION CONTROLS



## What's New

When requesting further information on new products, please use "Information Center" form.

### Rempe Brings Out New-Type Baseboard Convactor



KEY NO. B-1220

CHICAGO—Announcement has been made by Rempe Co. here of a new-type convactor for baseboard radiation which reportedly "eliminates the necessity of taking close measurements and ordering specific sizes, and enables the contractor to make the installation easily and quickly, doing all the fitting and cutting on-the-job."

Part No. 1 (illustrated) consists of a copper tube convactor with aluminum fins expanded on to the tube. It is available in 10-ft. lengths. It can be cut on the job to the desired length.

For rapid installation wall mounting brackets No. 4 are furnished, to be spaced on 34 in. centers. After

mounting the wall brackets, cutting of convactor to length, soldering of copper sleeves No. 2, and spuds No. 3, the convactor is slipped into the slots provided in the wall brackets, connections made to supply and return. Part No. 5 is copper bend for corner installations.

Formed steel cover, part No. 6, is available in 10-ft. lengths. This can be cut easily to fit on-the-job. End pieces 7L (left) and 7R (right) are used where convactor does not end at a wall. Cover is painted with primer coat and can be finished on the job to match room color scheme.

EDR capacity is 4.56 sq. ft. per lineal foot at 1 lb. steam pressure with air at 70° F. temperature. Can be used for steam or hot water.



Socket Type Ratchet Wrench Has Open End

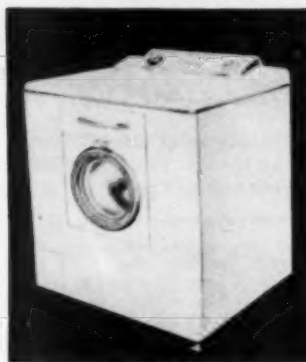
KEY NO. B-1221

LOS ANGELES—A socket-type open end ratchet wrench, designed to speed up wrenching operations, has been designed by the Tubing Alliance Co. here.

The exclusive open-end design of the TAC wrench enables the assemblyman to slip the wrench head and socket over the tubing and up on the fitting to speedily ratchet it tight. Then the wrench is slipped off the fitting, the openings on the head and socket are realigned, and the wrench is removed.

The wrench is said to be made of unusually strong steel alloys and features extra thin wall sockets from 3/8 to 4 in. in 1/16-in. increments and in 64 sizes. It has a full hinge, square drive, removable handle; ratcheting arc to 5°; and adapters, which are quickly snapped in to allow ordinary sockets to be used.

### Low Heat, High Breeze Featured In Caloric Dryer



KEY NO. B-1222

TOPTON, Pa.—Based on a low heat, high breeze drying principle that is said to use a lower degree of heat and a higher volume of air than any other clothes dryer, a new automatic, gas-operated, clothes dryer was introduced recently at the annual convention of the American Gas Association by the Caloric Stove Corp. here.

Advantages claimed for this method are that it cuts drying time, reduces fuel costs, guards against shrinkage, protects even the flimsiest fabrics from excessive heat and greatly reduces wrinkling.

One knob controls the entire dryer operation. Setting of the drying cycle lights the burner, starts the blower and cylinder, and lights the illuminating bulb and ozone lamp.

The loading door opens down to provide a loading and unloading shelf. It is counterbalanced and equipped with a master switch that shuts off the motor and burner when the door is opened.

Damp dry clothes may be removed for ironing at any time during the drying cycle. The cycle resumes when the door is closed.

The drying cylinder is supported front and rear to reduce vibration and wear and to provide quiet operation.

The lint trap is located at the front of the Caloric dryer at a convenient waist-high position. A tapered screen is said to filter out all the lint.

The entire body and frame are finished in baked enamel on Bonderized steel. The flat top, providing a

work space, is finished in white porcelain enamel.

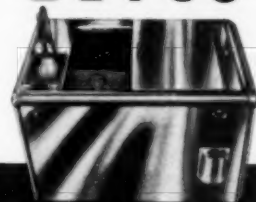
All controls are reached by removing the housing at the rear of the top or by removing the entire front panel. A small door in the front panel provides access to air shutter and burner. The dryer may be installed permanently in a flush-to-wall position, since it never need be moved for servicing.

The Caloric dryer is being made completely on new production lines at the Caloric gas range factory here. Production is expected to be in full swing by the first of the year.

In line with the manufacturer's policy on gas ranges, the dryer will be sold direct to dealers. Overnight delivery is available almost anywhere from Caloric's 44 warehouses.

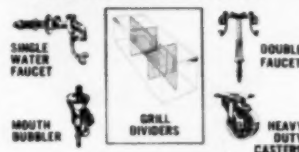
Only one model, the No. 100, is contemplated at the present time.

## BEVCO



QUALITY COOLERS YOU CAN FIT INTO YOUR LINE AND SELL AT A PROFIT

### ACCESSORIES



You sell quality, trouble-free cooling in these electric units that operate wet or dry. In 3 sizes... 4, 5, 6 ft. Unobstructed interiors. Baked Enamel finish for beauty and sanitation.

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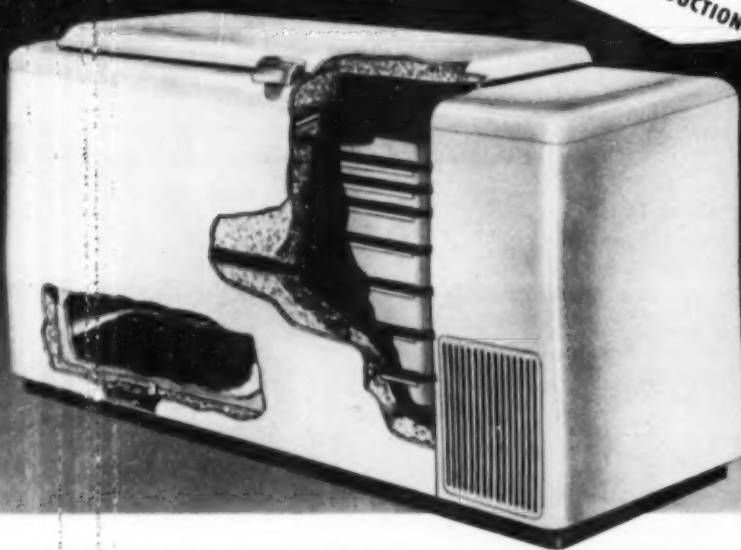
The BEVCO Company, Inc.

2216-2811 BROADWAY - ST. LOUIS 18, MO.

CUT "SHORT END" WASTE UP TO 50% WITH

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GM Tubing

GM's Exclusive  
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• SPEED PRODUCTION



IF YOU BUILD home freezer units, you'll welcome the time-and-material-saving advantages of GM Steel Tubing.

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## What's New (Cont.)



### Matot Bakery Freezers Have Hot Gas Defrost

KEY NO. B-1223

CHICAGO—A pair of self-defrosting reach-in bakery freezers of 96 and 144-pan capacities are being manufactured by D. A. Matot, Inc. here.

The freezers feature an automatic hot gas defrost system that operates on short controlled cycles to assure minimum temperature rise, the company says.

Mullion type "Slo Flo" velocity coils are used.

All steel, all welded, tank-type construction is used with 4 in. of insulation between inside and outside shell, vapor sealed. Interior is one-piece porcelain enamel with rounded corners.

Black porcelain enamel pan slides eliminate metal to metal contact, preventing pans from sticking or binding. They are removable for cleaning and designed to allow for 100% pan clearance.

Full length doors (two on the smaller model, three on the larger) are full-opening and chip-proof. Adjustable latches near top and bottom of each door assure tight, positive seal, while automatic electric heater strips around the door jambs elimi-

nate ice and frost. The bakelite breaker strip projects beyond the face of the box to provide a double seal against heat loss and icing. It is pointed out.

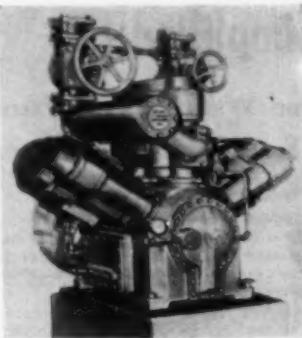
The smaller freezer, the ADB 60, is 72 in. wide, 31 in. deep (34 in. with hardware), and 74 in. high. Domestic crated weight is said to be 1,040 lbs.

The larger freezer, the ADB 90, has the same height and depth measurements but is 107 in. wide. It has a domestic crated weight of 1,620 lbs.

The freezers are designed to hold a recommended temperature of 8 to 12° F. but can attain -20° F. if desired.

They are intended to help solve bakery production problems by eliminating stales and permitting the baker to bake ahead for his rush days.

The manufacturer does not recommend the use of the freezer as a long-term storage box. Though baked goods could be stored for several months, he notes, a period of two weeks is considered to be the ultimate for the intended purpose of the freezer.



### Ammonia Compressor Has 200 Tons Capacity

KEY NO. B-1224

CHICAGO—A new ammonia compressor of up to 200 tons capacity manufactured by the Creamery Package Mfg. Co. here was introduced at the Dairy Industries Exposition.

The new model is called the 6H type "K" ammonia compressor, and is the largest of CP's type "K" multi-cylinder compressors.

The 6H is compact in design and incorporates all the features of other CP type "K" compressors, including full water-jacketed cylinders, water-cooled seal bearing, oil cooler, forced-feed lubrication, automatic capacity control, unloaded starting, and CP shaft seal.

The 6H is a 6-cylinder, 6 1/2 by 5 compressor. At 20 lbs. suction line pressure and 155 lbs. condenser pressure, it produces over 108 tons of refrigeration.



### Fuel Oil Filter Offers Free Flow, Ceramic Element

KEY NO. B-1225

OAKLAND, Calif. — Designed to operate with the largest oil burner installations, a new Sette model KS fuel filter has been introduced by the Marquart Mfg. Co. which is located here.

The filter incorporates a pre-screening top section in addition to a large "Microstone" ceramic filter element. The manufacturer claims that the unit offers the freest flow of any filter of comparable size, and that resistance to fluid is scarcely more than that imposed by the 3/4-in. inlet and outlet tube fittings.

The top 120-mesh pre-screening section can be cleaned independently, and is said to take 80% of the work off the filter element. A drain cock provides for removal of sediment or water in the main filter bowl.

Unbreakable transparent pre-screening dome cover and filter bowl allow user to see when either section needs cleaning. The filter element may be removed for cleaning or replacement by release of a single screw.

All service operations may be

performed without disturbing line connections.

The "Microstone" ceramic element is said to remove all harmful scale, dirt, and water, while maintaining free flow through controlled high porosity.

The unit is recommended for use on the suction side of pressure fuel feed systems.

Model SS for small to medium installations, and model MS for medium to large burner applications were introduced earlier this year, according to the company.

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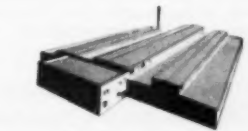


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## Residential Air Conditioning Simplified (2)

**When Installations Move from Luxury Class, Demand Will Be Great; Here Are Ways for Home Builders, Contractors To Meet Some Technical Problems**

By Alwin B. Newton, Vice President, Engineering, Acme Industries, Inc.

A large number of installations in the Southwest have been made with self-contained equipment provided with a remote air-cooled condenser. A typical installation of this type is shown in Fig. 7 in which the furnace is mounted on top of the air conditioning unit, and above the furnace is an air-cooled condenser taking air from the attic space and discharging it outdoors. These systems have been quite economical but suffer from high air temperatures when drawing air from the attic space lowering the efficiency of the system. They, however, ventilate the attic space with a beneficial effect on the amount of heat entering the house.

### Try Locating Highboy Furnace On Top of Compressor

I venture to say that, though we will see more and more air-cooled equipment of this general type, and it may be that a good arrangement, although I have not seen it tried, would be to locate the highboy furnace on top of the compressor unit with the cooling coil and air-cooled condenser in separate duct areas built integrally with the furnace and located above it. In this case we must cross the hurdle of having a refrigerant-containing coil on the discharge side of a furnace as far as local codes are concerned.

Any of the foregoing installations have one other point which requires consideration, namely, that they will be located close to the heating system; and, therefore, will probably be in the central portion of the house. Hence, in the case of any service requirement, a serviceman must enter through the living quarters, take his tools in through the living quarters, and must be provided with space in which to work.

A self-contained liquid chiller like that of Fig. 8 also permits air conditioning in conjunction with a hot water boiler by the use of separate room units such as those shown in Fig. 9. Self-contained water-cooled liquid chilling equipment for such uses has been in full production for several years in sizes of 2 through 15 hp. The schematic water piping for such installation appears in Fig. 10.

### Several Schemes Are Used With Heating Installation

The problems which exist when air conditioning is added to an existing heating installation are a little different. Here the systems shown in Figs. 3 and 4 are frequently used. Occasionally the system of Fig. 6 may be used but here again the system of Fig. 10 would seem to lend itself to any type of warm-air installation with a minimum of interior work or space finding to be considered with a little additional work in the form of replacing radiators with remote room units, the air-cooled or water-cooled unit for chilling water

also adds to existing warm air or steam heating systems.

Steam conversions are handled by adding a steam converter as in Fig. 11 or by converting the boiler to hot water operation. There are, of course, hundreds of installations which do not have warm-air heat, but have steam or hot water. In many parts of the country where heating has not been required from central heating systems, air conditioning is a definite and drastic requirement. In residences in these locations, there is frequently no room for ductwork and here again the water distribution type of equipment proves the most economical and desirable. Chilled water is piped to individual room units consisting of a circulating fan, cooling and heating coil, drip pan, and filter, together with an adequate distribution system.

### Be Careful Not To Oversize Cooling Equipment

Both the direct expansion type of system and the water chilling type of system must be extremely adaptable to variations in the characteristics of each installation. Fig. 12 shows a typical rating curve for a 3-hp. direct expansion residential air conditioner. Since the air is circulated by a fan outside the air conditioner, variations from 900 up to at least 1,200 must be accepted. I might point out too that if one is careful not to oversize the cooling equipment, the c.f.m. requirement for cooling will seldom exceed that for heating even in the northern areas.

The condensing temperature required will depend on the water conditions with water-cooled equipment. One should not blindly use the common 105° condensing temperature unless the larger savings in water obtained by a higher condensing temperature are now more than offset by the greater electrical demand.

For example, if in the case previously cited where city water was to be used in the condenser at a top temperature of 80° from the mains, 105° condensing temperature would probably have required a leaving water temperature not to exceed 97°. For a 1,000-hour season with an average internal wet bulb of 67° and 1,200 c.f.m. circulated, one would have required 340,000 gal. of water and 3,040 kwh. of electricity.

### Current Will Increase with Condensing Temp. of 120°

While readjusting the water regulating valve to allow a condensing temperature of 120° with the same internal conditions, approximately 170,000 gal. would be required, but the electrical requirement would increase to 3,408. One should then investigate whether 170,000 gal. of water cost more than 440 kwh. of electricity.

Such an analysis need be made only once in a given locality but any

indication of actual saving which can be made along this line helps in the matter of eligibility of the buyer if the house is purchased on FHA terms.

Much may also be written regarding the control of residential air conditioning systems. Ideally since an air conditioning system affects both the temperature and humidity in a residence, and since both are important to comfort in summer cooling, one's first thought might be to control both temperature and humidity. However, to do so on the so-called "in-between days" will in the interests of economy require reheat.

### Reheat Keeps Temperature Up

Reheat, when used, serves to keep the temperature nearly up to the summer control point and prevents the air conditioning equipment from lowering the temperature, and tendency to do which might otherwise keep the humidity at a high value, or prevent any reduction in humidity at all.

Reheat control is very simply attained with air conditioning systems in which the cooling is done on the return side of the heating equipment. In typical systems a room thermostat and humidity controller are connected in parallel to operate the air conditioner. The thermostat is set at a normal cooling level and the humidity controller at some humidity between 50% and 60%. A low limit thermostat which may be separate from the usual heating control room thermostat and which may be so connected that it is energized only when cooling is in operation, is set from 3° to 4° lower than the cooling thermostat.

### Higher the Reheat Setting, The Greater the Economy

It is used to operate the heating equipment when humidity reduction is required at this low temperature. The higher the setting of the reheat thermostat, the greater the economy. The usual heating thermostat may be used for this purpose if set somewhat above normal summer standby temperatures.

When the cooling equipment is on the supply side of the furnace instead of the return air side, additional control is required to limit the temperature of air discharged from the furnace to 85° or 90° and thus to preserve the dehumidifying ability of the air conditioning equipment. Even so, there is, of course, some sacrifice of efficiency which is not present when the cooling equipment is on the return side of the heating equipment.

However, in the vast majority of installations, and particularly with relatively tight houses as built today, and even with weather stripping and reasonable tightness of construction in older houses, satisfactory control can usually be attained without reheat merely by seeing that the actual operating differential of the control equipment is small enough to prevent excessively long off periods of the cooling equipment. In such cases, a single thermostat may be used to control the compressor, and the fan may be run continuously or operated only when the compressor is in operation.

### Where Heating Is Installed, Control May Not Need Change

When air conditioning is added in a residence where heating is already in operation, it is often not desirable to change the heating control at all

The air conditioning industry is at the threshold of a tremendous boom—in the residential field. But this prospective boom involves problems of marketing, design, installation, and service.

Some of the practical aspects of the technical problems involved are ably outlined in the accompanying article by Alwin B. Newton of Acme Industries, who presented this as a talk under the title of "Making Residential Air Conditioning Simpler" before a joint meeting of the Detroit and Western Michigan ASRE sections at Jackson, Mich. recently. This is Part II of a two part article.

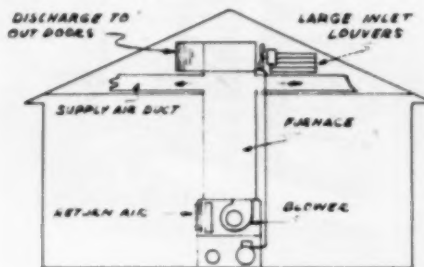


FIG. 7—Air-cooled condenser has been installed in attic over furnace and unit.

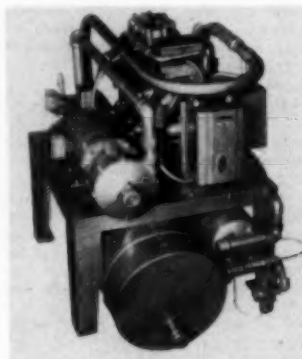


FIG. 8 is a self-contained Acme "Flow-Cold" liquid chiller that can be used in residential air conditioning with, for example, a hot water system.

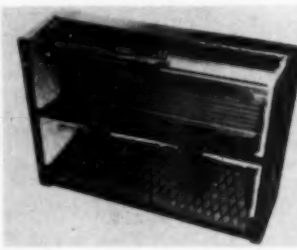


FIG. 9 shows a separate room unit for heating with hot water and cooling with chilled water.

to the already existing heating controls.

In new installations and in installations where the heating control may be subject to improvement, automatic changeover is easily attained by special thermostats now available for the purpose. A typical thermostat employs two separate low-voltage switches and two separate adjustment levers. One lever adjusts the cooling temperature and the other the heating temperature, and they are so arranged that it is impossible to set their "off" points closer together than 3°.

As time goes on it seems apparent that automatic changeover will be

(Concluded on next page)

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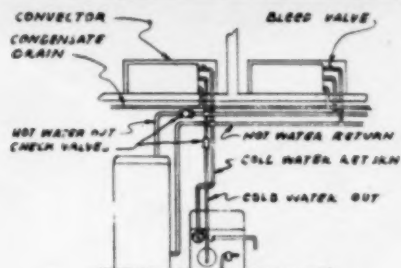


FIG. 10 is typical piping arrangement of liquid chiller used with hot water system.

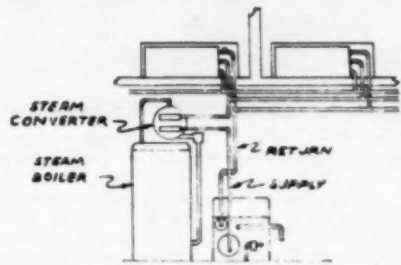


FIG. 11—Room convectors to provide year-round air conditioning can be used with steam system by employment of steam converter.

### Residential Air Conditioning Simplified--

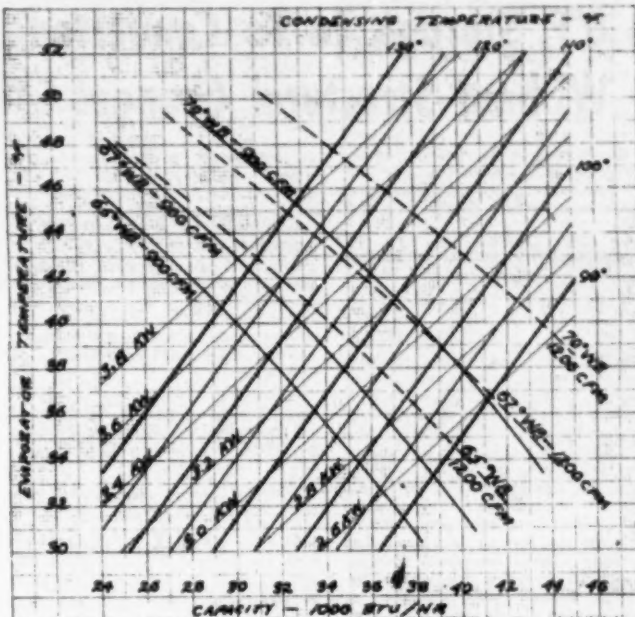
(Concluded from preceding page) required so that in the spring and fall when a family is away from home, they can expect to find complete comfort upon returning whether heating is required or cooling is required.

Before closing, I should like to make some mention of proper sizing of air conditioning equipment. I think without exception the most troublesome jobs that I have encountered in residential work from the point of view of comfort results have been those in which the air conditioner would start and stop automatically

two or three times an hour under the most severe load conditions.

Sometimes in the same neighborhood similar houses have been observed with half the capacity of that installed in the trouble job and produced perfectly satisfactory and acceptable results though the equipment ran continuously on severe days from early in the morning until late at night.

Usually continuous operation is to be preferred in severe weather, since stopping the air conditioning equipment results in an immediate rise in both humidity and temperature, both



## Jet Pump Permits 0°F. Storage To Be Converted Into Blast Freezer Without Structural Changes

DALLAS—Representing a radically new approach to the problem, a "jet pump" has permitted Alford Refrigerated Warehouses here to convert 0° F. storage space into a blast freezer with no changes in the warehouse structure.

The pump was devised for Fred F. Alford, head of the warehouse, by Edward Simons, consulting engineer and national president of the American Society of Refrigerating Engineers.

### NO REFRIGERATION EQUIPMENT INVOLVED IN PUMP

No refrigeration equipment is involved in the jet pump itself. It consists of a plywood chamber 20 ft. long by 3 ft. square, suspended near the ceiling. At one end is a 7½-hp. Buffalo Forge axial-flow fan. Along the bottom are four jets, also made of plywood.

The fan pulls in 12,000 c.f.m. of -20° air which is discharged down through the jets. Design of the jets and the pallet arrangement of the turkeys below induces a cyclone-like air movement. This builds up additional air circulation of 18,000 to 19,000 c.f.m. so there's a minimum air flow of 30,000 c.f.m.

To lower the temperature of the room to -20° F. from the previous 0° F. at which it operated, additional Kelco water defrost ammonia blower coils were installed.

So effective is the operation of the jet pump that temperatures of -19° F. were measured by thermocouples evenly distributed among the turkeys.

### DISCOLORED TURKEYS PLAGUED INDUSTRY

What led to the development of the jet pump is explained by Alford.

"The entire refrigeration industry has long been plagued by the problem of freezing turkeys and related poultry products quickly enough to prevent discoloration," he explains.

"Actually, the discoloration does not affect the taste and quality of the bird and is not usually present after the bird has thawed. It is just that the consumer is a little squeamish about buying discolored fowl."

"Since it appeared that we would be doing a large amount of business in poultry products this season, we felt we should devise a method of meeting this industry-wide discoloration problem before it presented itself to us."

"The commonly accepted tunnel system was not appealing because of the high cost and structural changes in our plant that would have been required. I cannot say how much, but it would have cost a tremendous sum to build a blast tunnel of sufficient size to handle the volume we expect," Alford said.

"As we have in many other cases,

we abandoned the 'commonly accepted' method and went to work on something to suit our particular needs. Simons studied the problem carefully and came up with the jet pump idea."

"We are now happy to announce that we can freeze 200,000 lbs. of poultry products in a single day, and without any structural alterations we can increase the load to 1,000,000 lbs. with additional equipment," Alford revealed.

Construction of the jet pumps is quite simple, according to Simons, but obviously extensive study and thought lie behind their inception and design.

They are made of ½-in. thick plywood with all the heavier framing on the outside to prevent any interference with air movement inside. The four jets are evenly spaced along the center line of the bottom of the duct or cabinet.

These are also made of the same thickness plywood and extend 13 in. below the bottom of the duct. Sides of the nozzles are set at an angle of 13° off the vertical, but the ends are square with the bottom of the duct. They do not extend up into the duct but are flush with the bottom.

### SPECIALLY TREATED LUBRICANTS KEEP MOTOR FROM FREEZING

Duct is suspended by steel rod hangers from the structural steel roof framing supports with additional hangers for the axial flow fan installed at one end. Specially treated lubricants, incidentally, are used to keep the fan motor from "freezing" when not in operation.

Success of this blast freezing method depends in no small degree to the proper arrangement of the pallets loaded with turkeys or other poultry.

"We have found that a space of 14 in. between the piles of pallets works best," Simons said. "We also used full 1-in. thick lumber for the pallets instead of the usual ¾-in. wood."

These measures are intended to insure best possible air circulation through the pallets.

The results of the jet pump development may perhaps be more far-reaching than just the new blast-freezing method itself, Simons believes.

"For instance, we now have obtained one of the most complete compilations of data on mass freezing in existence," he said. "This alone is a big step in the refrigeration industry's effort to devise methods of regulating weather conditions in food storage plants."

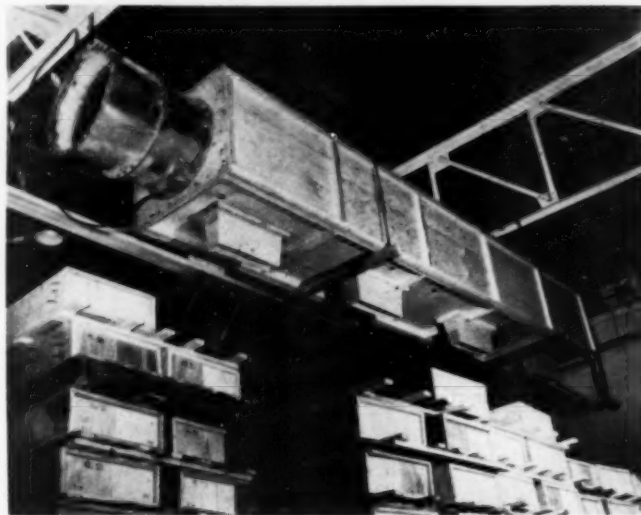
"For years the industry has paid most of its attention to controlling humidity as well as temperature in homes and buildings. Only recently have instruments been created to regulate relative humidity at sub-freezing and near-freezing temperatures."

"We believe the data we have compiled on this subject will help further to control relative humidity and, in turn, will help in reducing food losses in cold storage plants."

Simons indicated this new data will be revealed in the near future after it has been fully correlated.

It might also be pointed out that the development of the jet pump at the Alford warehouses is not the

## Commercial Refrigeration



JET PUMP devised by Edward Simons for Alford warehouses converts cooler into blast freezer by inducing 30,000 c.f.m. movement of -20° F. air through pallets of turkeys below.

only "first" for this organization. Its twin one-story warehouses in Dallas, each 1,700 ft. long and 250 ft. wide, provide 7,500,000 cu. ft. of cooler and freezer storage in one and 8,500,000 cu. ft. of dry storage in the other.

The represented numerous innovations in warehouse design, construction, and operating methods when they were opened in 1948.

"We obtain heat for our office building and dry storage area from water used to cool our 11 natural gas-driven compressor engines," comments Alford as an example. "This is the same system used in most automobile heaters. Elliott Halliwell, our chief engineer, was the father of this idea."

"The result is that we are able to heat the areas mentioned without incurring extra fuel costs. We simply push air through a radiator carrying

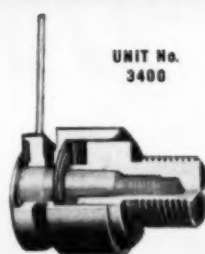
the hot water, then duct the air into our offices and dry storage area."

"Our plant uses the direction expansion, full-flooded ammonia system in the freezer sections and the circulating brine system in the coolers."

"To supplement this, in anticipation of a greater demand for freezer space next year, we plan to install enough absorption equipment for several hundred tons of additional refrigeration," he reveals.

"This in itself is not unusual, but we plan to use 'waste heat' to operate the system. Our 11 natural gas engines (and we plan to install three more soon) burn a lot of gas and consequently throw off a lot of heat through the exhausts. The exhaust heat, coupled with the heat of the water used to cool the engine, are the heat elements we intend to use to operate our absorption-type equipment."

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This rubber-encased connector links a refrigerator relay with a Fusite hermetic terminal, which is welded to the compressor. Originally, the connector had a brittle plastic case which presented various problems. Our engineers suggested a molded rubber case, also redesigned the contacts. Resulting improvements include: (1) Greater structural strength, (2) Elimination of damage in handling, (3) Faster assembly, (4) Better electrical connection, (5) Higher "pull-out" rating. And if you have problems involving the design and production of similar, or more intricate electrical assemblies, you, too, can "make a good connection!" Just write or call us without obligation, for recommendations.



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WIRING HARNESSES AND ASSEMBLIES • CORD SETS • HEATER AND EXTENSION CORDS • ELECTRICAL SWITCHES • RELAYS • MOLDED RUBBER PRODUCTS

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**Speed-Freeze**  
PRODUCTS

BEVERAGE COOLERS AND  
INSTANTANEOUS DRAFT  
BEER COOLERS.  
(With Refrigerated Faucets)

WRITE  
IDEAL COOLER CORPORATION  
3333 EASTON AVE. • ST. LOUIS 8, MO.





## ARE SHODDY PRODUCTS THE RULE NOWADAYS?

Art de Desrochers  
Route 3, Wenatchee, Wash.

Editor:

Why is quality and pride of workmanship the forgotten factor in modern American production? Why are most current products "junk" in comparison with their counterparts of 20 years ago? It can not be lack of know how. Many disgusted men: distributors, salesmen, servicemen, and the ultimate buyer are beginning to ask why?

Why does a company make an electrical switch in 1928 that lasts for years, yet make one now that pops out in two? Why use finishes that rust off in a couple of years when 1928 finishes had to be removed with a blowtorch after 20 years? The list is endless... any man in the field can add scores to the complaints.

Whether they realize it or not many old line companies are coasting on

a past reputation. For some it is later than they think. Filtering slowly through the past reputation is a flood of recent-past stuff that soon will engulf the sales departments.

What is the man in the field to think? It would seem that manufacturers hire bright engineers to design a superior product. Then hire a cost-cutting production manager to louse up the design. New techniques are great UNLESS they repeat past mistakes or cheapen the end product!

Whether the buyer's market is with us or not I will leave to the economists. But I do know that even the most avid salesmanship will not make up for a shoddy, fast-buck product. Nor convince the man in the field.

I would like to see a return to justifiable pride in a good product, an honest product, a well-made product... made of good materials, by competent workmen, and well inspected. Think it over!

ART DE DESROCHERS

## WATER CAN BE RETURNED TO MAINS AFTER USE

Dallas Air Conditioning Co., Inc.  
Dallas, Texas

Editor:

I have just read your editorial in the Nov. 10 issue of AIR CONDITIONING & REFRIGERATION NEWS entitled "Less Water for Air Conditioning."

This is very interesting, particularly since Dallas is experiencing a critical water shortage at this time with no prospects for improvement in the situation until we get a general rain.

You, of course, probably know that in this section of the country the installation of a water saving device such as an evaporative condenser, or a cooling tower, is a must on all air conditioning systems above 1 hp. primarily due to the high cost of water, and now, due to the fact that the city council has prohibited the use of waste water in air conditioning systems.

A partial solution to this problem, where rather cool supply water from the city mains is available, might be the return of this water to the city main after it has served its purpose of cooling the condenser. Years ago, this was permissible in the city of Beaumont, Texas, and I personally sold several jobs where water was taken from the main and discharged through the condenser and back into the main at a point down stream. The only requirement is a pump with sufficient capacity and head to overcome the friction in the lines and through the condenser.

This idea might not be practical for extremely large installations, but it should be practical for the smaller installation where the volumes of water required are not equal to or

greater than the actual volume of the water being used for other purposes in the particular area involved.

Just thought I would pass this idea along to you for what it might be worth if the city fathers can reconcile themselves to allowing the temperature of the water in the mains to rise a few degrees.

MARVIN L. BROWN,  
Vice President

## FEAR—CONSTRUCTIVE OR DESTRUCTIVE?

Washington, D. C.

Editor:

I was more than just interested in your article in the Oct. 27, 1952, issue of the AIR CONDITIONING & REFRIGERATION NEWS entitled "Take Another Look" and in a particular statement which you made, namely, "God meant us to have fears."

You have struck an important point... a point which will undoubtedly have much to do with whether this world will be at peace or war. I am reminded again of a question which I have found to be thought-provoking for people I have met and that is "What kind of a God have I?"

Fear is a very serious threat to all mankind when you realize that it often, if not most often, is turned outward as hatred.

GEORGE R. MOWRY

## Universal Diffuser Names 3

NEW YORK CITY—Universal Diffuser Corp. here has recently appointed the following sales agents: The Aires Co., Philadelphia; Harris Sales, Pittsburgh; Lydick-Barmann Co., Fort Worth, Texas.

## Oct. Plant Washer Sales Highest Since March '51

CHICAGO—The American Home Laundry Manufacturers Association reported that factory washer sales in October totaled 327,814 units, a gain of 10.3% compared with the same month of 1951 and the highest volume since March, 1951, when 368,455 washers were sold.

It was noted that the 1951 total included a small projection made for non-reporting companies which do not belong to the association. This projection was made monthly until the end of 1951.

October factory sales of automatic tumble dryers set a record. Sales amounted to 83,510 units, 90.9% above October, 1951, and 16.8% better than September, 1952.

Ironer sales in October totaled 23,204 units. This was an increase of 15.4% over October a year ago and a gain of 12.1% from September of this year.

## Styro Sales In New York To Distribute 'Styrofoam'

MIDLAND, Mich.—The Dow Chemical Co. has named Styro Sales Co. of New York City a distributor for "Styrofoam."

The new distributor will handle the expanded polystyrene plastic which is used in the low temperature insulation, buoyancy, and decorative fields.

Styro Sales is owned by Henry Pearlman, while Bernard Greene is the manager.



Fan or gravity types... fin and tube brazed... plate type crimped... clean... tight... standard or special to fit your needs exactly.

WRITE FOR DETAILS

**RUDY Manufacturing Co.**

Specialists in

Manufacturing, Engineering, and Construction

DOWAGIAC, MICHIGAN

JUST ASK US!

Turn to "What's New" Page for useful information on new products.



## ANOTHER LA CROSSE LEADER!



### SUPREME BOTTLE COOLER

Economy and efficiency team up to make this low price, high quality cooler more and more popular in schools, restaurants and hotels where refrigerated storage for milk and other dairy products is needed. Attractively finished in blue baked finish with stainless steel lids... 3" Fiberglass insulation... Model 461 illustrated.

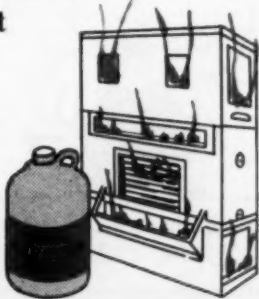
### LA CROSSE COOLERS

Factory and Gen'l Office: 2901 Leary Blvd., S. La Crosse, Wis. Export Office: 60 Broad St., New York City. Cable Address: Estimport.

## WHY DESTROY

Expensive Equipment  
by using  
Destructive  
Substances?

Chemicals that eat their way out of Metal, Wood or Plastic containers are injurious to the very surfaces that they are intended to treat. If a glass container should be accidentally broken, the contents could do untold damage to valuable property!



## SOLVEX

(In tablet or granular form)  
LOWERS HIGH HEAD PRESSURE QUICKLY  
(And May Be Used While Plant is in Operation)

REMOVES RUST, SCALE, ALGAE  
And other encrusting matter from Condenser Tubes and Compression Jackets in 1 to 5 days. AND SOLVEX KEEPS 'EM CLEAN.

BE SAFE! USE **SOLVEX!**

Manufactured by  
**CHEMICAL SOLVENT CO.**  
3005 16th Street, North  
BIRMINGHAM, ALABAMA

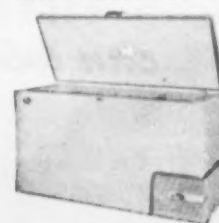
Distributed by  
**VIRGINIA SMELTING CO.**  
WEST NORFOLK, VIRGINIA

## ONLY WILSON GIVES YOU

4  
CHEST  
MODELS  
8, 15, 19, 24  
cu. ft. sizes



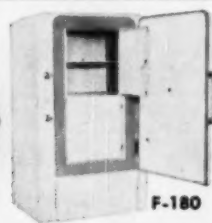
FC-82



FC-190

## SO MANY STYLES AND MODELS

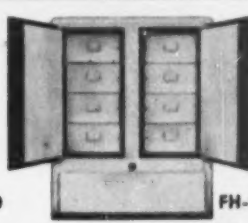
3  
SELF CONTAINED  
UPRIGHT  
MODELS  
18, 23, 30  
cu. ft. sizes



F-180



F-230



FH-30

## TO FILL EVERY FREEZER NEED

9  
SECTIONAL  
EXPANDABLE  
MODELS  
30, 60, 90  
cu. ft. sizes



FD-301



FD-601



FD-302

**DISTRIBUTORS:** If you're planning to take on a line of freezers, look into Wilson. Wilson is the line with a future for you... for Wilson freezers have the features, the quality, the dependability, and the price to make sales easy.

For complete details and availabilities of wholesale distributor franchises, write, wire, or phone.

**WILSON REFRIGERATION, INC., 101 Glenwood Avenue**  
Smyrna, Delaware

HOME FREEZERS • FARM MILK COOLERS • COMMERCIAL REFRIGERATORS

# Refrigeration Problems and their solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

## A Temperamental Refrigerator

### QUESTION

Can you tell me what might be wrong with a Whisk refrigerator that runs fine most of the time, but other times it defrosts for no reason that I can find?

I thought maybe it was the thermostat, so I put on a new one, but it's no different. I brought it into the shop and kept it a couple of days and it worked all right. I took it back and it worked 2 1/2 for the customer for several days; then started the same old thing. I put on another thermostat; by no dice. Now the customer is back, and I have already spent more time on it than I am going to be able to collect service fees for.

It is a make that is not very well known around here, and I've never worked on one before, but it does not seem much different from the popular makes. Is there something peculiar about it that causes this?

### ANSWER

While this is not one of the best known makes, it is a good refrigerator, and there is nothing peculiar about it that would cause this trouble. This is just something peculiar to this particular installation that has somehow been overlooked.

Refrigerating machines are not temperamental like people. They are much more dependable and understandable than people as a rule, and if they do act up, there is always a reasonable, logical cause.

But is there something peculiar about this installation? Presumably this refrigerator is used in a normal kitchen in a home. Does it seem to defrost at any regular time, and is there some other condition that always occurs along with the defrosting? Have you checked for low voltage?

### QUESTION

The defrosting seems to always be during the night. Mrs. Smith goes down to the kitchen in the morning at about 6 o'clock, and the refrigerator is off and defrosted and the thermometer in the box up to about 50°. She starts to get breakfast and

before long, the refrigerator starts and works fine all day.

If I could find out what does it, maybe I could get a patent on it as an automatic defroster.

These people just moved over in this part of town in September. They lived in an apartment before, but they used this same refrigerator. They didn't have any trouble with it.

They have a house now—a sort of story and a half, but I don't see what difference that makes.

We don't have much voltage trouble here. I serviced a lot of refrigerators in their part of town, and I don't have voltage trouble to amount to anything. I have checked their voltage; it was 106 volts—a little low, but I don't think low enough to be causing any trouble.

Their kitchen is small, so they keep the refrigerator in a sort of pantry just off the kitchen. I was afraid it wouldn't get enough air in there, so I told them to keep the pantry window open a little, so it's plenty cool in there.

Since I first wrote you, it is doing about the same, except that two nights it was OK, but now it's doing the same thing again.

### ANSWER

Your second letter contains some clues. First, low voltage or high voltage seem to be eliminated as a suspected cause. Second, the system worked OK in their former home which was an apartment, and it was OK in this home during the summer. Third, it is in a pantry off the kitchen. Fourth, for two nights recently, it did not defrost.

Finally, you have checked the refrigerator over carefully, and even changed the thermostat a couple of times, so the probabilities are that the trouble does not lie in some defect in the refrigerator itself, but rather in some attendant condition—something different in the new home from the old apartment.

Apparently, it has been quite cool in the pantry during the nights lately. Consequently, there has not been enough load on the refrigerator to cause the compressor to run, so the evaporator defrosts.

This is characteristic of the performance of a refrigerator in a room that is not much warmer than the desired refrigerator temperature. The refrigerator door is not opened at night, so it stays rather cold inside. The heat leakage load is very small, so there just is not much reason for the thermostat to come on. Consequently, the compressor is off most of, if not all night. It is automatic defrosting, but uncontrolled and too much of it.

### YOU WERE CORRECT, BUT—

You were correct in cautioning them about lack of cool air and to leave the window open a bit, especially during the hot days of last summer. But what about at night, and especially what about those two nights lately when the refrigerator did not defrost?

This is just surmise, but perhaps the user, for no particular reason, has been closing the pantry door after supper or at bedtime. With the window open a little during these cool nights, it could get quite cool in the pantry overnight. Maybe, again for no particular reason, the pantry door was left open for those two nights, so that the pantry was fairly warm those two nights. As a result, there was enough heat load on the refrigerator to cause the unit to run at least a few times during the night—enough to keep the evaporator frosted anyway.

The pantry window should prob-

ably be kept closed and the pantry door open during cool and cold weather. If this is the solution, and the chances are that it is, it sounds simple after it is discovered. But some of these uncomplicated things are the hardest to figure out. Their very simplicity causes one to overlook the answer.

The most obvious thing is sometimes the hardest to see. So don't overlook those seemingly simple, obvious causes of trouble. It has been said before, but it will bear repeating. Look for the simple uncomplicated things first; it's surprising how often one of them is the cause of the trouble.



GUY HAIRSTON



WENDELL ENDSLEY

## Hairston & Co. Represents Marlo In Atlanta Area

ST. LOUIS—Marlo Coil Co., manufacturer of heat transfer equipment, has announced the appointment of Hairston & Co. of Atlanta, to represent Marlo in that area. Guy Hairston will be assisted by Wendell Endsley, sales engineer, in servicing contractors and architects with the complete line of Marlo air conditioning and refrigerating equipment, the company said.

### PARTS JOBBERS

Servicemen can pick up Motors and ADAPTERS of your counter and carry them in their cars; service completed in one call, a distinct advantage. ADAPTERS also help you sell 1 to 3 hp.—103-C allied items: Motors, Belts, Pulleys, etc. Engineering Research Associates, Inc. 3475 East Nine-Mile Road Hazel Park, Michigan

THESE GREAT **BTC** CABINETS

can win new sales for you!



Model SS-5310-6D with superstructure and 3-dimensional picture. Also available without superstructure.

Compare their smart lines . . . their stunning display area . . . their uniform low temperatures with those of other cabinets. Then you'll know why BTC's Glass Front Display Cases can make new sales for you.

Right now is the time to get the facts on these great new BTC Cases. Don't delay . . . write The Brewer-Titchener Corporation for bulletins describing both Ice Cream and Frozen Food Cabinets.

★ It pays to make space on your showroom floor for BTC's new Glass Front Display Cases. Because both these cabinets offer outstanding features every dealer wants!



Model SS-5310-D with superstructure and 3-dimensional picture. Also available without superstructure.

★ **HANDSOME GLASS FRONT** Quadruple Thermopane glass front can't be beat for building up frozen food or ice cream sales!

★ **EXCLUSIVE HIDE-A-WAY LID** Fully insulated and self-contained. Slides under rear deck, out of sight!

★ **ROOMY INTERIOR** Holds 10 Cu. Ft. of frozen food or 420 pints of ice cream . . . yet fits floor space only 53" x 30"!

★ **EVEN TEMPERATURE** Contents stay solidly frozen thanks to 4 lateral plates and baffle glass between packages and window.

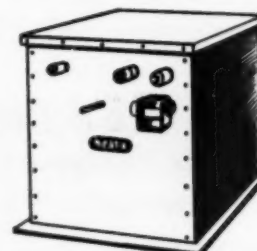
DISPLAY **BTC** CASES

The **BREWER-TITCHENER** Corporation  
BINGHAMTON • NEW YORK

HIGH CAPACITY LIQUID COOLERS

by

heat-x



Refrigerant and liquid in separate tubes cast within an aluminum block mean a sanitary, trouble-free cooler.

For coolant, resistance welding and mold cooling . . . plating, anodizing and quenching baths. Has numerous water cooling applications: circulating systems, photographic units, bottling plants, dairies, paper mills, bakeries, etc.

HEAT-X heavy duty liquid coolers are equipped with TX valve and temperature controller. Merely make connections (to condensing unit and water supply) and unit is ready to operate.

Request free descriptive bulletin.



**THE HEAT-X-CHANGER CO., INC.**

BREWSTER • NEW YORK



### Distributor Sales Of Refrigerators By States

SALES OF ELECTRIC HOUSEHOLD  
REFRIGERATORS BY DISTRIBUTORS  
TO DEALERS—BY STATES—FIRST  
NINE MONTHS

Reports were received from 14 companies

States	Sales
Alabama	45,943
Arkansas	13,197
California	32,179
Colorado	175,397
Connecticut	30,696
Delaware	31,320
District of Columbia	5,543
Florida	30,908
Georgia	71,930
Idaho	64,533
Illinois	5,589
Indiana	118,796
Iowa	64,164
Kansas	32,146
Kentucky	27,119
Louisiana	43,169
Maine	46,457
Maryland	11,776
Massachusetts	37,959
Michigan	40,832
Minnesota	96,417
Mississippi	33,974
Missouri	34,886
Montana	77,887
Nebraska	7,306
Nevada	18,600
New Hampshire	3,604
New Jersey	7,003
New Mexico	80,489
New York	8,600
North Carolina	361,055
North Dakota	68,576
Ohio	9,381
Oklahoma	128,364
Oregon	40,667
Pennsylvania	21,025
Rhode Island	149,822
South Carolina	18,178
South Dakota	36,199
Tennessee	5,612
Texas	64,305
Utah	134,713
Vermont	8,973
Virginia	3,799
Washington	48,969
West Virginia	26,181
Wisconsin	34,561
Wyoming	40,500
<b>TOTAL UNITED STATES</b>	<b>2,415,135</b>

Participating companies: Admiral Corp., Avco Mfg. Corp., The Coolerator Co., Deepfreeze Appliance Div., Motor Products Corp., Frigidaire Div., General Motors Corp., General Electric Co., Gibson Refrigerator Co., Hotpoint Co., Div., General Electric Co., International Harvester Corp., Kelvinator Div., Nash-Kelvinator Corp., A. J. Lindemann & Hoverson Co., Norge Div., Borg-Warner Corp., Philco Corp., Refrigeration Div., Westinghouse Electric Corp.

### NEMA September Sales of Refrigerators Reach 257,362; 9 Mos. Sales Lag at 2,633,680 Units

Summary for September and First Nine Months, 1952  
Complete Refrigerators Only—Sales by Sizes—Units

SEPTEMBER (16 Companies)				
Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1. Less than 4 cu. ft.	1,772	1	326	2,299
2. 4 cu. ft.	14	18	32	64
3. 5 cu. ft.	25,533	96	2,974	28,599
4. 6 cu. ft.	25,593	1,577	2,292	29,462
5. 7 cu. ft.	57,189	2,991	6,487	66,667
6. 8 cu. ft.	56,755	2,204	3,011	61,970
7. 9 cu. ft.	15,169	1,811	700	17,680
8. 10 cu. ft.	44,135	748	1,435	46,318
9. 11 cu. ft.	3,961	236	144	4,341
10. 12, 13 cu. ft. and up	230,111	9,682	17,569	257,362
<b>11. Total</b>				

FIRST NINE MONTHS (16 Companies)				
Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1. Less than 4 cu. ft.	16,891	92	2,907	19,890
2. 4 cu. ft.	216	371	17	604
3. 5 cu. ft.	200,931	3,462	26,154	230,547
4. 6 cu. ft.	263,342	20,856	24,713	308,911
5. 7 cu. ft.	610,016	14,461	44,692	669,169
6. 8 cu. ft.	520,686	44,016	24,024	588,726
7. 9 cu. ft.	259,050	12,384	9,495	280,929
8. 10 cu. ft.	437,018	11,659	11,384	460,061
9. 11 cu. ft.	71,627	790	2,426	74,843
10. 12, 13 cu. ft. and up	2,379,777	108,091	145,812	2,633,680
<b>11. Total</b>				

Participating companies: Admiral Corp.; Avco Mfg. Corp.; The Coolerator Co.; Deepfreeze Appliance Div., Motor Products Corp.; Frigidaire Div., General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Hotpoint Co., Div. of General Electric Co.; International Harvester Co.; Kelvinator Div., Nash-Kelvinator Corp.; A. J. Lindemann & Hoverson Co.; Norge Div., Borg-Warner Corp.; Philco Corp.; Refrigeration Div.; Sanitary Refrigerator Co.; Seeger Refrigerator Co.; Westinghouse Electric Corp.

### Detroit ASRE, ASHVE Plan Joint Meeting

DETROIT—"What Type Air Conditioning System—Central Station vs. Packaged Units" will be discussed by S. M. Miner of York Corp. before a joint meeting of the Detroit ASRE section and the Michigan ASHVE chapter at 8 p.m. Monday, Dec. 15 in the small auditorium of the Engineering Society of Detroit. A 6:30 dinner will precede the talk.

### NEMA Sales--

(Concluded from Page 1, Column 2)  
For the first three quarters of this year, sales aggregated 2,633,680, against 3,309,338 in the corresponding period of 1951.

Distributor sales to dealers in the first nine months totaled 2,415,135 units. This compares with 2,640,272 in the like period of last year.

Factory shipments of water heaters were also up in September over a year ago and down from 1951 in the nine-month total. September sales totaled 47,579 units, compared with 41,522 in the similar 1951 month. In the first nine months, 406,316 units were shipped, against 544,326 in the like 1951 period.

Electric range factory shipments in both September and the first nine months fell behind the year-ago totals. September sales amounted to 64,260 units, compared with 96,182 in September, 1951. Sales in the first nine months totaled 694,630, against 928,827 in the corresponding period of last year.

### Prefab Air Conditioning--

(Concluded from Page 1, Column 2)  
pany next year will offer the cooling and heating units in any of its models through its nationwide organization of 350 dealers.

Wampler declared that the contract "brings air conditioning to the mass home market. Both Gunnison Homes and Carrier are confident that the initial contract will be increased by many times prior to next summer's major building season."

He said the "Weathermaker" air

conditioning units will be compact and may be accommodated in any of the Gunnison Homes models along with other mechanical equipment. Purchasers of Gunnison Homes will be able to include air conditioning in their mortgage financing, according to General O'Brien.

General O'Brien further said: "Air conditioning already has become a major factor in selling new homes. We believe it will soon be a 'must' in the home building industry."

Wampler added that Carrier's experience this year indicates that "Mr. and Mrs. America are clamoring for year-round air conditioning."

He cited more than a dozen large-scale Weathermaker Home developments across the country started in cooperation with Carrier this summer which contemplate the erection of more than 3,500 air conditioned homes.

### TYPHOON

Air Conditioning

ENGINEERED FOR EVERY NEED

PRICED FOR EVERY BUDGET

- Air Conditioning Units 1½-20 tons
- Multi-Packaged Systems Up to 60 tons
- Prop-R-Temp Heat Pumps 2-20 tons
- Evaporative Condensers
- Packaged Water Chillers

TYPHOON AIR CONDITIONING CO., Inc.  
794 Union Street, Brooklyn 15, N. Y.

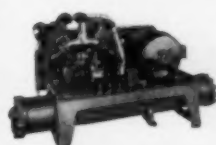
## ONE OF THE MOST COMPLETE LINES IN THE INDUSTRY

# NEW improved Curtis CONDENSING UNITS at NEW, LOW PRICES

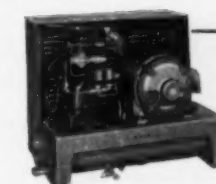
All with these  
Famous Curtis  
Features:

- TIMKEN TAPERED ROLLER BEARINGS
- POSITIVE LUBRICATION
- OIL LEVEL SIGHT GLASS
- SLOW SPEED OPERATION FOR LONG LIFE AND HIGH EFFICIENCY

Plus a complete  
line of packaged  
units in six sizes  
2-3-5-7½-10-15-H.P.



**WATER COOLED CONDENSING UNIT**  
Low, Regular and High Temp., from ½ H.P. to 50 H.P.



**AIR COOLED CONDENSING UNIT**  
Self-contained, remote, truck type, from ¼ H.P. to 3 H.P.



**COMBINATION AIR AND WATER COOLED CONDENSING UNIT**  
Plenty of reserve capacity for extreme hot weather. Operates primarily as air cooled unit with shell and coil condenser as auxiliary in case of overload. From ½ H.P. to 3 H.P.



**COMPRESSOR UNITS**  
For use with evaporative condensers, low temperature cooling, processing and air conditioning installations, from 3 H.P. to 50 H.P.

SEE this New CURTIS line at the International Heating and Ventilating Exposition--

INTERNATIONAL AMPHITHEATRE  
Chicago, Illinois  
January 25-30, 1953  
BOOTHS 234, 236, 238, 338, 337, 339

For Immediate Information—Use This Coupon

CURTIS REFRIGERATING MACHINE DIVISION  
of Curtis Manufacturing Company  
1912 KIENLEN AVENUE, ST. LOUIS 20, MISSOURI

I am interested in direct factory franchise. Send complete details.

COMPANY NAME \_\_\_\_\_

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SIGNED \_\_\_\_\_



### WHY

## "The Thousand" LINE?

The Cutler-Hammer Line lets you get from your wholesaler a "specific-fit" replacement control for more than 1000 past and present refrigerator models. No "modifying." No fussing. Quick action. Faster profits. Dependable performance. Lasting good will.

Here are just a few of the "specific-fit" replacement controls in the unequalled Cutler-Hammer line and catalog.

9502N387 C-H "specific-fit" for Norge 1932-33 models.

9521N95 C-H "specific-fit" for Copeland 1939 models.

9521N417 C-H "specific-fit" for Briggs 1937 models.

9521N11 C-H "specific-fit" for Leonard 1937 models.

9525N107 C-H "specific-fit" for Crosley 1949-50 models.

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9525N107 C-H "specific-fit" for Crosley 1949-50 models.

9525N107 C-H "specific-fit" for Crosley 1949-50 models.

Want to save time and trouble on your refrigeration control replacements? Then make the Cutler-Hammer refrigeration control catalog your standard "guide" on replacements. Here you will find "specific-fit" units which are not merely listed but already manufactured by Cutler-Hammer for more than 1,000 individual refrigerator models which the industry has produced since 1925. No "modifying," no fussing, no compromises, when you put in C-H "specific-fit" replacement control units. And you'll also quickly see how the widely-known Cutler-Hammer name (advertised in The Saturday Evening Post, Time, Newsweek, American Home, Better Homes & Gardens, House & Garden, etc.) builds customer confidence and good will. Do not forget, this C-H refrigeration control line includes the outstanding general purpose replacement control (9521N9) for use with motors having "built-in" overload protection.

**NEW CATALOG.** New 1952 C-H Refrigeration Catalog has 16 pages new material, 64 pages altogether. More "specific-fit" replacement units. 90 different box manufacturers listed and the C-H control to fit. Get a free copy and the control items you need through your authorized C-H refrigeration wholesaler. CUTLER-HAMMER, Inc., 1362 St. Paul Avenue, Milwaukee 1, Wis.

Featured by Cutler-Hammer refrigeration wholesalers and recommended by alert service dealers from coast to coast.



## PATENTS

Week of September 23  
(Concluded)

## DESIGNS

167,744. REFRIGERATED BEVERAGE DISPENSER. Henry Diepke, Pasadena, Calif., assignor to Shinkley Growers, Inc., Los Angeles, Calif., a corporation of California. Application April 14, 1952, Serial No. 15,315. Term of patent 14 years. (Cl. 20-3.)



The ornamental design for a refrigerated beverage dispenser, as shown and described.

## AVAILABLE FOR LICENSING OR SALE

International Harvester Co. has placed this patent on the Register as available for licensing on reasonable terms. Applications for license should be addressed to Patent Department, International Harvester Co., 180 North Michigan Ave., Chicago 1, Ill.  
Pat. 2,564,943. Insulation Seal for Refrigerated Cabinets. Patented Aug. 21, 1951. Relates to a refrigerator cabinet sealing construction for sealing the insulation medium disposed between the inner and outer walls of the cabinet. Group 25-84. Reg. No. 45,722.

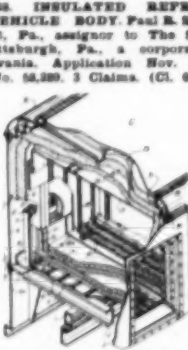
Week of September 30

2,615,008. REFRIGERATOR DEFROSTING SYSTEM. William L. Hansen and Harry G. Manco, Princeton, Ind., assignors to Hansen Mfg. Co., Princeton, Ind., a corporation of Indiana. Application Nov. 19, 1949, Serial No. 158,634. 6 Claims. (Cl. 25-4.)

1. In a refrigeration system, a refrigeration unit having a drive motor, a defrosting heater, a switch having a first position for establishing a circuit through said drive motor and a second position for establishing a circuit through said heater, a thermostat in the circuit between said switch and motor responsive to a predetermined temperature in the zone being refrigerated to complete the circuit from the switch to the motor, a timer in parallel with said motor so

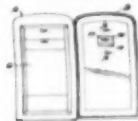
as to be energized simultaneously therewith and having a cam operable after a predetermined period of energization of said timer to move said switch from its first to its second position for a predetermined timed period, and circuit control mechanism actuated by said timer operable automatically to maintain said timer energized during said timed period and to de-energize said timer at the expiration of said timed period.

2,615,008. INSULATED REFRIGERATOR VEHICLE BODY. Paul A. Schnabel, Oakmont, Pa., assignor to The Schnabel Co., Pittsburgh, Pa., a corporation of Pennsylvania. Application Nov. 4, 1949, Serial No. 15,229. 3 Claims. (Cl. 25-11.)



3. In an insulated refrigerator vehicle body, a roof structure comprising vertical layers of sheet insulation arranged to form a step joint, metal sheathing enveloping the edges of the horizontal and vertical insulating layers, and a rounded metal corner piece extending from the outer roof sheathing to the side wall of the body having insulation disposed there-in said insulation at the corner being fortified by asbestos and foil.

2,615,009. REFRIGERATOR DOOR BUTTER COMPARTMENT. Milford J. Schrader and Donald E. Cooke, Greenville, Mich., assignors to Gibson Refrigerator Co., Greenville, Mich., a corporation of Michigan. Application Dec. 1, 1950, Serial No. 158,531. 12 Claims. (Cl. 25-49.)



1. In a refrigerator having a refrigerated food compartment and an insulated door providing access to the compartment, said door having a recess therein open from the inner side of the door, a shell within said recess providing a compartment open at its inner side, said shell having side wall areas enclosed by an unannulated area in communication with the outer side of the door and a closure equipped with a tray slideably mounted in said shell and having a handle pocket portion extending centrally within said shell.

2,615,010. REFRIGERATION. Clyde E. Piesger, Franklin, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application May 13, 1950, Serial No. 161,824. 1 Claim. (Cl. 25-106.)



In an ice making machine, a mold having a top and depending side walls



## PROCUREMENT INFORMATION

The following is a list of proposed procurements issued by the various indicated U. S. Government procurement offices. This list is compiled and made available daily on a free pick-up basis. Prospective bidders may obtain complete bid sets by a request to the purchasing office under which the purchase is listed in this synopsis. Be sure to identify completely the bid invitation you wish by including in your request the item description, the invitation number or reference number and the opening date. This will save time in filling your request. For reasons of economy, specifications are normally not included with the bid invitations unless the specification is a new one. First time bidders on a particular item should request a copy of applicable specifications and drawings at the time the request for a bid is made.

It is not necessary to refer solely to the issuing office for additional data on a bid invitation issued by any of the following U. S. Army Ordnance Offices: Ordnance Tank Automotive Center, Detroit Arsenal; Frankford Arsenal; Picatinny Arsenal; Haritan Arsenal; Rock Island Arsenal; Springfield Armory; Watertown Arsenal; and Watervliet Arsenal. Complete information on any purchase listed by any of those offices alone can be obtained from the Ordnance District Office nearest you. Its address is on file in your nearest Department of Commerce Field Office. Do not ask an Ordnance District Office for information on a purchase unless it is listed by one of the above-named offices. Ordnance District Offices do not have information on any other purchases.

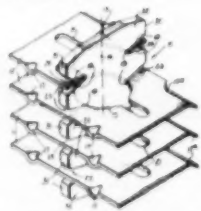
Invitations for Bids numbers will be followed by the letter "B." Requests for proposals or quotations will be indicated in this column by the letter "Q" or, if numbered, the number will be followed by the letter "Q."

## DEPARTMENT OF DEFENSE

Description	Quantity	Invitation No.	Opening Date
Corps of Engineers, U. S. Army, Jacksonville District, 375 Riverside Avenue, Jacksonville, Florida			
Heating and air conditioning system for central control building, Air Force, Maxwell Test Center, Patrick Air Force Base, Cocoa, Florida	Job	(ENG-08-123-53-23R)	6 Jan 53
Galveston District, Corps of Engineers, P. O. Box 1375, Galveston, Texas			
Refrigerated Storage Bldg., Ellington AFB, At Gens., Texas. Const. of one-story Wood Frame Bldg. 8150 S/F in Area W/Connecting Utilities only.	Job	(ENG-41-243-53-71)	23 Dec 52
Mobile Air Material Area, Brookley Air Force Base, Alabama			
Invitation for Bid/B. and Requests for Proposal/Q. are distributed to firms listed in the Bidders List maintained by the above activity. A complete bid set is available for EXAMINATION ONLY by prospective bidders at the Air Regional Offices located in the local trading area of the above activity.			
Machine Chilling, Sub-Zero inside dimensions 144 in. lg. x 48 in. wide x 48 in. dp. cap 1 hp open type compressor from 23 2/3 V 1 hp 60 cye. Must be portable. Must have a minimum of 4 swivel type casters which will support at least 1000 lbs. over and above the weight of the unit. Must	1 ea	(34A-53LP-757 B)	9 Dec 52

with an open bottom, cross partitions in the mold forming a plurality of cells, a platen for opening and closing the bottom of the mold, a coil overlying the top of the mold, a heat exchange system connected to said coil to deliver either a cooling or heating medium to the coil to freeze liquid in the mold and release ice therefrom, and a vent opening in the top wall of the mold overlying each cell.

2,615,006. ADJUSTABLE AIR DISTRIBUTION GRILLE. Walter W. Kennedy, Rockford, Ill., assignor to Barber-Colman Co., Rockford, Ill.



1. A grille having two relatively perpendicular sets of fins and angularly adjustable crossbars with the parts of each set spaced apart longitudinally of the parts of the other set, said fins being composed of relatively thin sheet metal and having rows of spaced holes therein elongated in one direction to receive the crossbars in assembly and disposed intermediate the edges of the fins to provide lands on opposite sides of the holes, and said crossbars being of greater rigidity than the fins and having outwardly opening notches longitudinally spaced along the crossbar margins and flaring outwardly for coaction of their walls with edges of said holes to guide said lands into notches during turning of the crossbars in said holes.

2,615,006. ADJUSTABLE AIR DISTRIBUTION GRILLE. Walter W. Kennedy, Rockford, Ill., assignor to Barber-Colman Co., Rockford, Ill.



1. A grille comprising a series of thin flat fins disposed in spaced parallel relation and having holes therethrough spaced longitudinally of the fins, a plurality of crossbars substantially thicker than said fins each extending through one set of the aligned holes of the fins and having marginal notches substantially wider than the thickness of said fins and defined by parallel side walls straddling the portions of the fins surrounding said holes, semicircular depressions formed in opposite sides of said crossbars adjacent the margins of each of said notches, and lugs projecting into said notches and toward each other from the depressed portions of the crossbar with the opposed inner ends of the lugs spaced apart a distance slightly greater than the thick-

## Government Contracts

have at least a 15 ft. extension cord with polarized type plug for 220 volt, 3 phase, 60 cycle AC.

Corps of Engineers, Albuquerque District, Albuquerque, New Mexico			
Construction of Commissary, refrigerated storage, and warehouse storage, Kirkland AFB, Albuquerque, N. Mex.	Job	(ENG-29-005-53-55R)	6 Jan 53
District Public Works Office, Headquarters, Fifth Naval District, Naval Base, Norfolk 11, Virginia			
Air Conditioning for Machine Shop at the Naval Ordnance Plant, South Charleston, West Virginia. Deposit of \$10 required for plans and specifications	Job	35824	16 Dec 52

## NOTICE TO SMALL FIRMS

The following is a list of proposed procurements which the representatives of the Small Defense Plants Administration and Contractors Offices have jointly determined, in accordance with the criteria set forth in Section 714 (f) (2) of the Defense Production Act, as amended, shall be awarded to small business concerns. Therefore, the procurements listed below will be negotiated only with small business concerns. Unless otherwise designated by the Small Defense Plants Administration, a small business concern is normally considered by the Department of Defense to be any concern which, including its affiliates, employs in the aggregate fewer than five hundred persons. (If, however, in the light of the facts and circumstances existing at the time of the placement of the contract, the contracting officer considers that a contract cannot be made with a small business concern without detriment to the Government's interest; e.g., because of unreasonable price or other justifiable reasons, the contracting officer may request withdrawal of the joint determination in which case the procurement may not necessarily be placed with small concerns exclusively.)

Bureau of Ships, Washington, D. C.			
Sink, temperature controller, with refrigerated storage cabinet, for photolithographic processing, and capable of operation on 115 volt AC power, spec. MIL-8-17058	21	522-56Q	23 Dec 52

## END OF SMALL FIRMS LISTING

## CONTRACTS AWARDED THROUGH DEC. 1

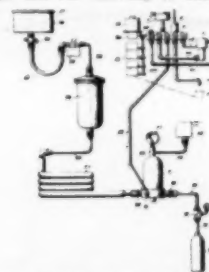
General Stores Supply Office, 700 Robbins Avenue, Philadelphia 11, Pennsylvania  
Coolers: Bubbler Drinking Water.—735 ea.—\$91,887.—Sunroc Company, Glen Riddle, Pennsylvania.  
Oklahoma City Air Materiel Area, Tinker Air Force Base, Oklahoma City, Oklahoma  
Electric Service and Cooling Tower for 800 HP Compressor. Building 215, Project No. OC-46-53.—\$33,293.—Boyrington Electric Company, 1606 North Broadway, Oklahoma City, Oklahoma.  
Navy Department, District Public Works Office and Officer in Charge of Construction, Sixth Naval District, P. O. Box 365, Naval Base, South Carolina  
Refrigerators for kitchen equipment, U. S. Naval Industrial Reserve Plant, Bristol, Tennessee.—Job.—\$30,795.—Sperry Faragut Corp., 84 Fifth Street, Bristol, Tennessee.

ness of the fins for engagement with the surfaces of said fin portions.

2,615,304. DRINK DISPENSING APPARATUS FOR CARBONATED BEVERAGES. Hans G. Wiesen, New York, N. Y., assignor of one-half to Alexander I. Martin, New York, N. Y. Application March 13, 1948, Serial No. 654,022. 10 Claims. (Cl. 22-41.)

5. In a drink dispensing apparatus, the combination of means adapted to intermix liquid and gas and to produce an effervescent liquid, a pressure reducing chamber for storing said effervescent liquid under pressure for subsequent venting to atmosphere, a conduit adapted to convey effervescent liquid from the intermixing means to the reducing chamber, a venting conduit connected with the reducing chamber for relieving pressure therefrom to atmosphere, a syrup container, additional conduits adapted to convey effervescent liquid from the reducing chamber and syrup from the syrup container to a discharge pipe, and flow controlling means comprising valves in

said venting and additional conduits for coordinating the flow of liquids there-through and for relieving to atmosphere



pressure in said reducing chamber prior to flow of effervescent liquid from said discharge pipe.

(To Be Continued)

## MANUFACTURERS' REPRESENTATIVES!

As an industry service, AIR CONDITIONING & REFRIGERATION NEWS maintains a file of manufacturers' representatives—serving the refrigeration, air conditioning, and allied industries—in all parts of the country and in some foreign countries.

We periodically check our files to expand this service and request all qualified representatives (except those who have written within the last six months) to send us the following information today on their own letterheads:

1. Complete name of company or individual, address, and phone number.
2. Lines and products now carried (not necessary to list manufacturer represented).
3. Lines and products being added or interested in adding.
4. Territory covered by states, parts of states, or countries.

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13-B-33





AIMED AT boosting heating equipment, roadside sign is painted on cardboard or metal. Green, black, and red point duplicate firm's letterhead.

## 3x6-Ft. Reproduction of Letterhead Makes Attractive, Inexpensive Roadside Signboard

WACO, Texas—Want to get more punch and eye-appeal into your advertising signs? Want something that will stand out from the hundreds of signs no matter where it is used? That was the aim of Herbert M.

Kay, president of The Kay Co., local refrigeration, heating, and appliance dealer. His solution was a large reproduction of a company letterhead bearing appropriate copy. Inexpensively turned out, the signs

have shown increased selling power at roadside points, in the showroom windows, and at home shows, state fairs, and similar events.

The signs are 6 ft. high and 3½ ft. wide. They are mounted on either stiff white cardboard or metal, depending on the spot where they will be used. Green, red, and black paints are used to duplicate the firm's standard letterhead.

One sign (see picture) aimed at boosting sales of central heating equipment listed at the left several nationally-known brands the firm carries. Copy said:

"Dear Homeowner: Did you know that you can now have a central heating unit completely installed in your home for as little as \$9.95 per month? Ask us for details. Comfortably yours, The Kay Co."

## Increased Production Assures Adequate Oil For Home Heating

NEW YORK CITY—The oil industry says there will be adequate supplies of heating oils for a normal winter despite an expected 8 to 10% rise in demand over last year.

In Boston, B. Brewster Jennings, president of Socony-Vacuum Oil Co., assured owners of oil-heated homes that their requirements will be met.

Since the end of the refinery strike last May, he pointed out, "oil companies have increased their runs materially and have accumulated supplies of heating oils at an unusually rapid rate. There is every indication the tanks will be full at the beginning of the real winter season."

He added, however, that this prospect "probably will not be true" for the Pacific Coast because of continued low inventories there due in part to the Korean war.

Industry sources said current stocks are as follows:

Distillate fuel oil (used mostly for home heating)—122,000,000 barrels. This is a new record and about 13,000,000 barrels more than last year. Kerosene—around 34,300,000 barrels, compared with 36,000,000 a year ago.

Heavy fuel oil (used mainly for industrial purposes and for heating large buildings)—around 54,000,000 barrels, about 3,500,000 more than a year ago.

Installations of oil burners were said to be continuing at a fast clip. It is estimated that by the end of the year, 6,300,000 domestic oil burners will be in use. This would represent an increase of almost 600,000 since 1951. Oil burner installations have more than doubled since the end of 1946.

## Kingswell of Washington, D. C. To Distribute 'Uskon' Panels

NEW YORK CITY — William E. Kingswell, Inc., Washington, D. C., has been appointed a distributor for "Uskon" radiant heat panels, according to the mechanical goods division of U. S. Rubber Co.

The panels are made of conductive rubber sandwiched between layers of thin plastic.

The Kingswell organization will serve the District of Columbia, northern Virginia, and southern Maryland. The corporation has been a distributor for heating and air conditioning equipment for many years. William E. Kingswell is president and George F. Mergell is vice president in charge of sales.

## It's Still a Mouthful

SAN ANTONIO — The Heating, Piping & Air Conditioning Contractors Association of San Antonio and Bexar County, Texas, has changed its name to the Heating, Piping & Air Conditioning Contractors South Texas Association.

## WANTED

### NEW REFRIGERATION PRODUCTS

Reliable manufacturer with both chemical and mechanical production facilities wants new products to manufacture and sell through Refrigeration Wholesalers.

Send full information to Box 4167, Air Conditioning & Refrigeration News.

# Gas Heating Controls

By Service Information Division,  
White-Rodgers Electric Co.

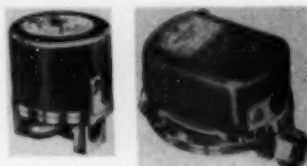


FIG. 18—Left) Two types of diaphragm-type gas valves. Small one at left fits some space as most solenoids.

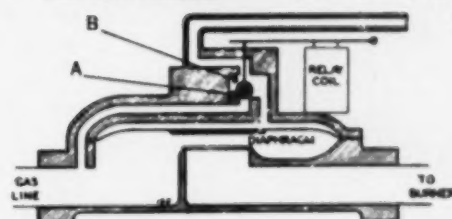


FIG. 19—(Below) Flow chart shows path of gas through diaphragm valve.

## 19—How Diaphragm-Type Gas Valves Operate

The White-Rodgers diaphragm valve is built in two types. The smaller of the two valves is 4 in. in diameter, the larger varies with the pipe size used from 6½ in. to 9½ in.

The small valve can be used to replace a solenoid because the diameter between the pipe entrance openings is the same as the majority of solenoids.

The smaller valve is available in pipe sizes of ½ in. to ¾ in.; the large valve, ¾ in. to 2½ in.

Fig. 18 shows the two valves. Shown in Fig. 19 is a flow chart indicating the path of gas through the valve.

The electrical assembly and the bleed port assembly—the two major operating assemblies of the valves—are interchangeable. This feature reduces service stocks.

The diaphragm is made of Vulcan, a synthetic material impregnated in a nylon fabric. Vulcan is not affected by any of the normal gases used in heating.

The valve disc is made of leather backed up with felt. This construction assures adequate oil reserve to keep the leather flexible and the felt acts as a cushion to assure positive closure of the disc against the valve seat. The disc is attached to the diaphragm with machine bolts.

The seat of the valve is machined into the valve body. It is a raised seat designed so that dirt does not easily adhere to it.

The bleed port assembly is made of stainless steel and aluminum—materials not affected by normal gases. All passage ways in the valve are larger than 50 drill size—adequate to meet the requirements where vapor phase gum or other gas may be present and affect valve operation.

In areas where gas gums normally collect on the top of diaphragms these valves will not stick open due

to the diaphragm adhering to any surface in the valve. Bosses in the top of the gas chamber above the diaphragm do not offer any surface of adequate area for the diaphragm to stick to.

Gum that collects on top of the diaphragm due to the properties in some gases will not harden, if air is required to harden the gum. The diaphragm remains flexible. The design of the bleed port assembly prevents air in any appreciable quantity from reaching the top of the diaphragm.

The valve is made of material not affected by sulphur in gas. All parts of the valve can be serviced from the top without disturbing the remaining assemblies. To clean the seat of the valve or to work with the diaphragm or disc, merely remove the screws from the rim of the cap or top assembly. Gaskets between the cap, diaphragm, and base prevent the valve parts from sticking together.

When replacing the diaphragm, run several of the cap hold-down screws upward from the underside of the rim of the valve. Place the diaphragm over the screws to properly align it. Be sure that the proper hole in the diaphragm lines up correctly with the opening that carries gas from the bottom of the valve to the bleed port assembly. If the holes are not properly aligned, the valve will not work.

To work on or to replace the electrical assembly, remove two screws that hold the terminal strip in place, and two screws holding the relay.

To work with the bleed port assembly, loosen the screws holding the relay, slip the relay aside, with end wrench loosen hexagon nut on bleed port assembly. With end wrench remove bleed port capsule. Do not disassemble the bleed port capsule. Wash the complete assembly in a good solvent. Never put oil in the bleed port capsule.

When replacing the bleed port assembly do not force any of the parts. Fit them in place snugly with your wrench.

# MIAMI BEACH

## holiday

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ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count. Please send payment with order.

### POSITIONS WANTED

**SERVICE ENGINEER** with 27 years' experience in commercial and industrial refrigeration, air conditioning and heating, up to and including 300 ton systems. Wants permanent connection with company in southern Florida. At present, service manager for one of Chicago's leading contractors. BOX 3992, Air Conditioning & Refrigeration News.

**FIELD REPRESENTATIVE**, now employed in an under-paid position and stymied for salary advancement, is looking for new employment which offers opportunity for betterment of income. Twenty-two years' experience in factory sales work in commercial refrigeration, packaged air conditioning and major appliance lines. Only three previous employers, and eighteen years with one, will indicate ability and stability. Qualifications to assume responsibility will be highly recommended by previous and present employers. Middle-aged, single, will move or travel anywhere. Write BOX 4160, Air Conditioning & Refrigeration News.

**PURDUE ENGINEER** graduating February 1st. Major in Mechanical Engineering. Specializing in Refrigeration and Air Conditioning. Interested in future of sales engineering. Married with draft status 3A. Good scholastic record. Write BOX 4170, Air Conditioning & Refrigeration News.

### POSITIONS AVAILABLE

**AIR CONDITIONING SALESMAN**. We want a first-class man who is now employed, but whose opportunities are not equal to his abilities. We'll furnish the opportunities—big city, established company. Carrier equipment, unlimited market, aggressive advertising, productive leads, expenses paid, commissions paid with order, congenial associates. Permanent position. Wonderful opportunity for a real salesman. Interview arranged if you can sell yourself. BOX 4165, Air Conditioning & Refrigeration News.

**CHIEF ENGINEER** wanted to take complete charge of Product and Research Engineering. Company manufactures low sides and related equipment. Old established concern, plans are to branch out in other phases of refrigeration and diversified products. Write giving full information in first letter, regarding experience, reference and salary expected. BOX 4166, Air Conditioning & Refrigeration News.

**REFRIGERATION ENGINEER** with experience application in hermetically sealed capillary self contained home freezers, refrigerators and beverage coolers. Lifetime opportunity with national Philadelphia manufacturer. Write to BOX 4168, Air Conditioning & Refrigeration News.

**AIR CONDITIONING ENGINEER** for New York City area. Graduate engineer preferred but experience in air conditioning field will be considered in lieu of a degree. Our firm is an active air conditioning contractor and this is a good opportunity for right man. Write giving all details in first letter. BOX 4169, Air Conditioning & Refrigeration News.

### EQUIPMENT WANTED

CASH FOR new or equal from compressors, condensing units with or without

condensers or motors. 5-25 H.P., one or odd lots. Also low temp coils, condensers, fans. Give full description. No junk, please, but put me on mailing list. Reduce that inventory! ART DE DESROCHERS, Rt. 3, Wenatchee, Wash.

**WANTED USED REFRIGERATORS** in working condition, electric or gas. Quantities only. 100 to 1,000. BEACH REFRIGERATOR CO., 196-11 Northern Blvd., Flushing 58, New York City. Phone Flushing 7-9569.

**WANTED REFRIGERATION** and air conditioning equipment for all types of business. Old established distributor. Mid-Atlantic territory. Reply BOX 4148, Air Conditioning & Refrigeration News.

**SURPLUS RELAY** for hermetic units—any size or make. Reply BOX 4150, Air Conditioning & Refrigeration News.

### EQUIPMENT FOR SALE

**BRAND NEW 1953 frozen food merchandisers** original crates. Model FDB18A, 18 cu. ft. thermopane doors; ultra modern superstructure; Kelvinator unit, 5-year warranty. Factory list \$733.50, your cost \$371.00. Order immediately; send for illustrations. MANN REFRIGERATION SUPPLY CO., 440 Lafayette Street, New York 3, N. Y.

**FOR SALE—Air Conditioning Unit**. 1 75 Ton, 14 Cylinder, 14L-14H Double End Chrysler Airtemp Compressor with 75 HP, 220/440 Volt, 3 Phase, 60 Cycle A.C. Century Motor, Water Cooled Condenser and all controls except Motor Starter. Also 4-15 Ton Aerofin Cooling Coils with Sporan Expansion Valves. Equipment has been used, but is in excellent condition. NATIONAL TWIST DRILL & TOOL CO., Rochester, Michigan.

**ATTENTION SERVICEMEN**—Send for our new catalog—on controls, valves, relays, brass fittings, V-belts—hermetic and open type units. All new merchandise at great savings up to 50%; sold on money back guarantee. WALTER W. STARR REFRIGERATION, 2833 Lincoln Ave., Chicago 13, Illinois.

**PROMINENT BRAND** serpentine Freezer Shelf Plates for sale at 80% off list. Plates are approximately 22 x 26 inches. Will sacrifice in lots of 12 for \$6.95 each. Single plates as samples will be sold at the same price F.O.B. YANKEE STATES DISTRIBUTORS, Storrs, Conn. Telephone 9634.

### BUSINESS OPPORTUNITIES

**MANUFACTURER'S REPRESENTATIVES**. Do you want an excellent winter item for your "off-season"? The Glycolator attaches to warm air heating or air conditioning systems. It sanitizes the air and reduces respiratory disease. New, nationally advertised and fast growing. Sells through distributors. Advise territory covered and details. Write GLYCOLATOR, Valencia, Penna.

**COMMERCIAL REFRIGERATION** and fixture business. Established 13 years. Excellent opportunity for an individual experienced in sales and service. Will sell at actual inventory—approximately \$10,000. Interested party will receive full and frank information. This business is located in Pittsburgh, Pa. BOX 4157, Air Conditioning & Refrigeration News.

### MISCELLANEOUS

**NORGE SEALED** units remanufactured or exchanged. Immediate delivery from stock, 2 year warranty. Freeze refrigerant. Write for prices and shipping instructions. Genuine Norge terminals for Norge sealed units. Sets of three, \$1.15 plus postage. MODERN REFRIGERATION CO., Inc., 12541 E. McNichols Road, Detroit 5, Michigan.



## ASRE Elects Officers at N.Y. Meeting--

(Concluded from Page 1, Column 4)  
paper presented before a Section meeting went to Alvin B. Newton of Acme Industries, Inc. for his paper on "Application and Control of Shell-and-Tube Water-Cooled Equipment." The Indianapolis section won the award for bringing about the largest percentage increase in paid-up memberships over the past years.

"The 1/2-hp., 115-volt room air conditioner is doomed," was a prediction made at the Room Air Conditioner Conference by C. C. Fitzsimmons, engineer for Underwriters' Laboratories, Inc. Fitzsimmons pointed out the problems and dangers in using room conditioners over 1/2 hp. on 115-volt power lines in outlining the new Underwriters' Laboratories standards for air conditioning equipment.

### ADDITIONAL FEATURES, FUNCTIONS DISCUSSED

Much of the main interest in the rest of the Room Air Conditioner conference centered about the "additional features and functions" that might be provided in room air conditioners.

Improper damper arrangement or incorrect designing can often bring about just the opposite of results desired in providing fresh air ventilation or exhausting of room air, declared W. L. McGrath, Carrier Corp. engineer. This can happen in tall buildings, where the "stack effect" of wind velocities may bring disastrous effects to a ventilating phase operation of a room air conditioner on the lower floors of a tall building. In the exhaust air function, the reverse will be true, where the dampering or design is wrong, in that it will work all right on the upper floors, but not on the lower floors.

There is a tendency to include a heating function with room air conditioners, and this is being done for the most part with strip heaters, although there is some experimenting being done with "heat pump" room air conditioners, and one speaker stated that there is a contractor in the Miami area making a business out of converting ordinary room air conditioners to "heat pump" type units.

There are cautions to be taken with strip heaters, it was pointed out, mainly being careful not to put in more strip heater capacity than the amount of amperage that the compressor draws on the power line, and to provide controls that won't permit operation of both the heater and the compressor at the same time, or of the heater alone without the blower being on.

Utility companies will be much more interested in promoting the room air conditioner if it has a heating function, declared J. R. Hartman, chairman, Commercial Section of Edison Electric Institute. The heating load would give the utility companies a much more satisfactory power load, he said, and he pointed out by means of charts how a room air conditioner could be used year-round in a great many parts of the

country if it provided both functions.

"If we are to maintain an industry volume of 4 million or more electric refrigerators a year, the industry must provide creative engineering to not only sell refrigerators to the remaining families which do not now have them and to all new families coming into existence, but also to persuade users to purchase a new refrigerator every 12 years or less," declared Walter M. Timmerman, general manager, Household Refrigerator Department, of the General Electric Co.

Speaking at a session on "things to come" in the household field, Timmerman said that "we cannot count on refrigerator failures or seriously depreciated performance to give us the replacement volume needed. Rather we must have a constant flow of new features to give Mrs. America so much greater value in convenience, performance, capacity, and appearance that she will be very unhappy with her 12-year-old refrigerator even though it may be performing about as well as when it was new."

### DETAILS OF HOW PRODUCT PLANNING WORKS AT G-E

Timmerman explained how G-E has established a system whereby each department is responsible for its own product planning and development. Product programs are recognized as joint responsibilities of marketing, engineering, and manufacturing, but control is placed in the marketing section under a product planning manager.

This manager's function is to translate sales requirements into engineering specifications as to features, costs, prices, and time schedules, and then to follow established programs to their completion.

The product planner sets up preliminary specifications for each model year for a five-year period. These specifications are reviewed (modified and finally approved) by a group consisting of the managers of engineering and manufacturing and an appearance design representative. Obviously, these specifications remain quite flexible and are subject to frequent change.

This organizational plan, said Timmerman, represents an effort to give adequate recognition to the importance of product planning and to establish it on a professional basis. The product planning group gives guidance to the advanced engineering activity to be certain their major effort is expended on projects which are likely to be the most productive.

Glenn Muffly, inventor and patent authority, gave an interesting discussion of "the possible household refrigerator of the future" which would include a drawer-type freezer compartment in the bottom, split doors on the regular door section, "multiple effect" or staging type of condensing unit hanging in a 4-in. space off the back, and a combined automatic ice maker and cold water dispenser.

He also predicted that new trends in homes of the ranch type, where visitors and guests see "right on through to the kitchen" will encourage the purchase of newer, more modern refrigerators.

## Deering Expansion--

(Concluded from Page 1, Column 3)  
chasing its own line under the Deering name, it will manufacture units for Burnham Corp., Irvington, N. Y., and Alisco, Inc., Akron, Ohio, under private labels of Burnham and Alisco, respectively.

Burnham, a 95-year-old firm manufacturing electric radiators, boilers, and allied heating equipment, will distribute air conditioners through its established dealers and distributors.

Alisco, a storm door and window concern, will market air conditioners through its own branches in Ohio and through its franchised Alisco distributors nationally.

Deering manufacturers room air conditioners designed for installation in steel and aluminum casement windows. It is said to eliminate the need for altering frames, muntins, and mullions of casement windows.

Last week, the company held a two-day national sales meeting attended by representatives from its 13 districts and from Burnham and Alisco. Invitations were also extended to one or more distributors from each of the districts. The meeting took place at the Gibson hotel and at the Mt. Adams plant.

## Remington Adds New Room Coolers--

(Concluded from Page 1, Column 3)  
named "The Director" and the 1 1/2-hp. unit will be known as "The Overton." Several water-cooled consoles were also shown in both the 1-hp. and 1 1/2-hp. sizes.

Leader models, identical to the console except without wood cabinets, will again be available. Leaders are finished in smooth baked-on enamel, on rust-proofed furniture steel, in chestnut brown color.

M. L. Judd, general sales manager who introduced the 1953 line, stated that Remington anticipated a greater demand for Leader models this coming year than has been experienced in the past.

"The Leader models are particularly adaptable to lower cost industrial, office, or home installations, and a number of home builders have signified their intention of incorporating these units in their 1953 building plans," the company stated.

"It may be used either in the room to be air conditioned, may be fitted with ductwork for remote installation, may be built-in, or may be concealed with paneling which matches the room's decorative scheme."

One of the features of the console line is Remington's "Climate Compensator." This, the company said, "adapts a single unit, at the flip of a switch, to the ideal air conditioner for hot, dry climates where added cooling is required or to an air conditioner providing greater dehumidification for extreme humid climates or seasons."

"Positive ventilation," which reportedly assures that outdoor air will

be admitted in controlled, draft-free quantities, regardless of the direction of the wind, is another Remington console feature. "Variable Velocity" air outlets are also featured.

"Heating" remains one of the leading features of Remington console units, according to the company.

"The heating is of sufficient power, 7,000 B.t.u. per hour, to warm room and ventilating air and maintain automatically a comfortable, equalized pressure and temperature in all parts of the room in late spring, early fall, or all winter in milder climates," Remington said.

Among the other accessories available for the Remington console room air conditioners is an automatic cooling control which will maintain a pre-selected room temperature by turning the compressor on or off as needed.

In addition to its line of consoles, Remington will have five window units available in 1953 in capacities of 1/2, 3/4, 1, and 1 1/2 hp.

Ventilation, circulation, filtering and noise elimination, with or without cooling and dehumidification, are provided with one 4-position control on Master models. An additional control knob operates a damper for ventilation or exhaust.

All deluxe models will be factory-equipped with the Climate Compensator. An automatic thermostat control is standard equipment on these models.

Besides the Climate Compensator and "Hi-Lo Cool" positions, the single master control knob on deluxe units offers a "Hi-Lo" fan choice when

the unit is operated for ventilation and re-circulation but not cooling.

Decorator-designed cabinets are in "Mission Grey" with "Sahara Beige" twin plastic grilles so the window units will compliment all surroundings. Easy filter removal, accomplished without removing the cabinets, is another Remington feature.

The twin grilles of the 1/2-hp. units provide a 16 directional air pattern. The grilles of all units are completely rotatable through 360°.

The 1/2-hp. and 3/4-hp. units are in identical cabinets, extending into the room 10 1/2 in. The 1-hp. projects 12 1/2 in. into the room.

Distributor showings of the 1953 line were being held nationally. Prices, according to M. L. Judd, will be competitive but as yet have not been released.

A substantial increase in Remington's advertising and promotion program will back the line.

## Allocation Controls on Methylene Chloride End

WASHINGTON, D. C.—The National Production Authority has eliminated allocation controls on methylene chloride by revoking Schedule 9 to NPA Order M-45.

Schedule 9 was issued in the fall of 1951 when methylene chloride shortages threatened to delay some defense programs. Expanded production and a decline in demand have made the revocation possible, it was explained.

During the period from April to October, 1952, production showed an increase of 40%.

# Tecumseh offers REMOTE UNITS

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Included in the remote line are air cooled models from 1/4 to 3 H.P., combination air-water cooled models from 1/2 to 3 H.P. and water cooled models from 1/2 to 15 H.P.

The complete line also includes hermetics from 1/8 to 1 1/2 H.P. and self-contained units from 1/4 to 3/4 H.P. Look to Tecumseh for a complete line of quality units for all of your refrigeration requirements up to 15 H.P.



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